Central Bank of Kenya

Kenya Financial Sector Stability Report

Sustained Resilience in Multi-shocks Environment

September 2024

ABOUT THE FINANCIAL STABILITY REPORT

The Kenya Financial Stability Reports provide an assessment of the country's financial system stability by the Financial Sector Regulators in compliance with the Central Bank of Kenya Act, Section 4(2) and the Financial Sector Regulators Memorandum of Understanding (MOU) of 2009 (Revised in 2013). Maintaining and safeguarding financial system stability is vital in fostering the development of a vibrant, sound and stable, and inclusive financial sector that enables Kenya meet her national development goals in a sustainable manner. The Financial Sector Regulators Forum (FSRF) established vide the MOU provides a mechanism for collaboration and cooperation in information sharing, prudential supervision, financial stability and financial inclusion issues, among other areas of mutual interests. The Forum's members are; the Capital Markets Authority (CMA), Central Bank of Kenya (CBK), Insurance Regulatory Authority (IRA), Retirement Benefits Authority (RBA) and Sacco Societies Regulatory Authority (SASRA). The National Treasury and Planning, Department of Cooperative Development, Kenya Deposit Insurance Corporation (KDIC) and Insurance Policyholders Compensation Fund (IPHCF) are associate members of the Forum. The information contained in this annual publication may be reproduced without restrictions provided due acknowledgement is made of the source. Any enquiries concerning the Kenya Financial Stability Reports should be addressed to: –

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Financial Stability Report 2023 provides an assessment of developments and risks that Kenya's economy and financial sector faced in 2023 and during first half of 2024. Globally, the period experienced high inflationary pressures triggering strong and faster pace of monetary policy responses by advanced countries. This came on the backdrop of a reversal from a long period of very low interest rates, low volatility, and ample liquidity, associated with sustained accommodative monetary policy in advanced economies. The strong and faster pace of monetary policy tightening resulted in steep rise in interest rates, causing unexpected and unintended impact on financial sector. The institution with a large proportion of debt in their asset portfolio and those that relied on debt and money markets to meet their liquidity needs were most affected. This exposed institutions to liquidity, duration, and credit risks. In addition, risks spillovers to Emerging Markets and Developing Economies (EMDEs) was significant, causing increased vulnerabilities across many countries.

Climate change risks to the financial sector and overall economy also increased in frequency, intensity and geographical coverage. There were more cases of prolonged droughts, heavy flash floods and mudslides, and severe storms including typhoons and hurricanes across many parts of the world. These came with significant physical and transition/or liability risks to the financial sector, increasing vulnerabilities given the limited fiscal space to mitigate the effects and/ or adaptation. A combination of policy uncertainties, vagaries of climate change events and impact of monetary policy tightening on economies and wellbeing led to socio-political unrests in most affected areas, culminating into reversals and/climbdown on pursuit for tight fiscal and monetary policies that raised economic and financial stability concerns.

Domestically, Kenya's economy was resilient to domestic and global shocks, expanding by 5.6 percent in 2023 compared to 4.9 percent in 2022. The growth was on account of robust growth of service sectors, mainly transport and storage, financial and insurance, information and communication, and accommodation and food services. Agriculture also recorded strong recovery due to conducive weather, thus contributing to the expansion. The economy grew by 5.1 percent and 4.6 percent in the first and second quarters of 2024, respectively. Growth is projected at 5.1 percent in 2024 and 5.5 percent in 2025, reflecting robust performance of agriculture and resilience of key service sectors. This is underpinned by favourable weather conditions, conducive policies and easing financial conditions. Downside risks to this growth include narrow fiscal space owing to high public debt and enhanced fiscal consolidation, slow pace of monetary policy easing, tight liquidity conditions in the international market, unpredictable weather patterns and political risks. Additionally, tightening lending standards may reduce credit uptake, which is to support economic growth and contributing to financial sector stability through earnings [not clear because less credit should undermine economic growth not support it].

Overall, Kenya's financial system was sound, stable and resilient to interest rates shock, exchange rate depreciation, elevated credit risk, decline in stock prices and high inflation in 2023. The banking sector had sufficient capital and liquidity buffers and strong earnings in 2023. The sector however recorded elevated credit, interest rate and operational risks. The microfinance banks incurred losses and were thinly capitalised during the period. Capital markets were characterised by decline in equity and bond prices, with significant scale-down by foreign investors and inactive corporate bonds market. This negatively impacted the returns on investment for the pension sector, which also recorded decline in member contributions. Return on investment and gross premiums in the insurance sector improved. However, claims paid exceeded premiums received, indicating mispricing of risks. In addition, the sector recorded an increase in cases of technology related crimes. Assets quality and profitability of Saccos improved in 2023 despite high cost of living experienced by members. The Financial Markets Infrastructure continue to play its vital facilitative role, ensuring that payments and settlements are concluded efficiently and effectively.

It completely altered the government securities market landscape in terms of purchase and sell of securities in both primary and secondary markets. This is expected to contribute to financial sector deepening, inclusion and stability.

The resilience of the Kenyan economy is expected to contribute to financial sector soundness and stability in 2024, with adequate capital and liquidity buffers. This is to be complemented by well-coordinated policy reforms, a robust regulatory oversight and monetary policy easing on inflationary pressures. On regulatory front, the Central Bank of Kenya (Amendment) Act No 10 of 2021 that brought previously unregulated digital lenders under CBK's regulatory armpit and operationalisation of non-withdrawable deposit taking SACCO regulations are expected to enhance stability and growth of digital credit providers and SACCOs, respectively.

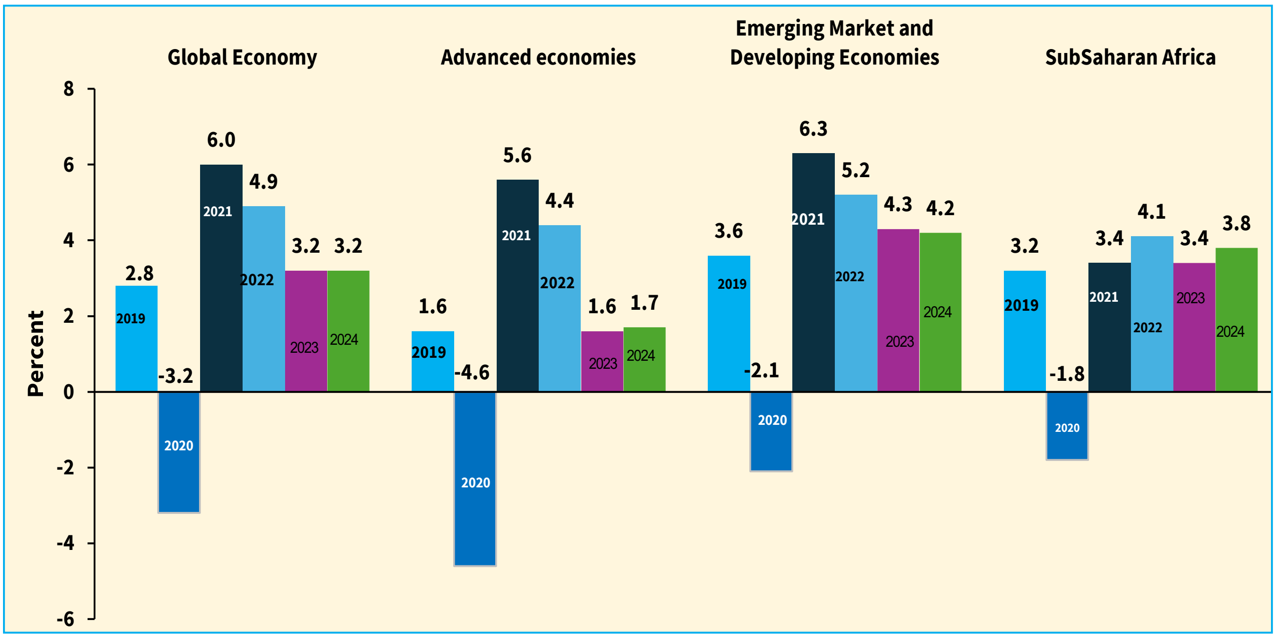
The downside risks to the strong growth and sustained financial sector stability in 2024, however, remain. The higher-for-longer interest rates environment, the ever-evolving technology-related risks, climate change risks and geopolitical conflicts and geoeconomic fragmentation may have implications on the domestic economy and the financial sector outlook. A careful policy balancing involving monetary tightening/easing to deal with inflation, fiscal consolidation measures to address public debt sustainability concerns and regulatory reforms should converge towards achieving a stable macro-financial environment in 2024 and beyond. Use of appropriate policy tools to address financial stability concerns separate from those targeting monetary policy objectives, clear communication on the intended objectives, enhance risk assessment, and corporate governance commensurate with risk profile of the sector are areas of priority.

1. ECONOMIC AND FINANCIAL CONDITIONS

1.1 Global Conditions and Risks

The global economy remains resilient to sticky inflation, higher-for-even longer interest rates, geopolitical conflicts and geoeconomic fragmentation. The April 2024 IMF WEO estimated the global economy to have grown by 3.3 percent in 2023 and is projected at 3.2 percent in 2024 **(Figure 1).** The UN WESP-Mid 2024 however, projects global economic growth of 2.7 percent in 2024 while the World Bank's Global Economic Prospects of June 2024, projects the global growth of 2.6 percent in 2024. The 0.7 percentage points gap between the IMF growth scenario and that of the World Bank may reflect differences in the severity and persistence of shocks to global economies in 2024.

Figure 1: Global Growth Projections (percentage)



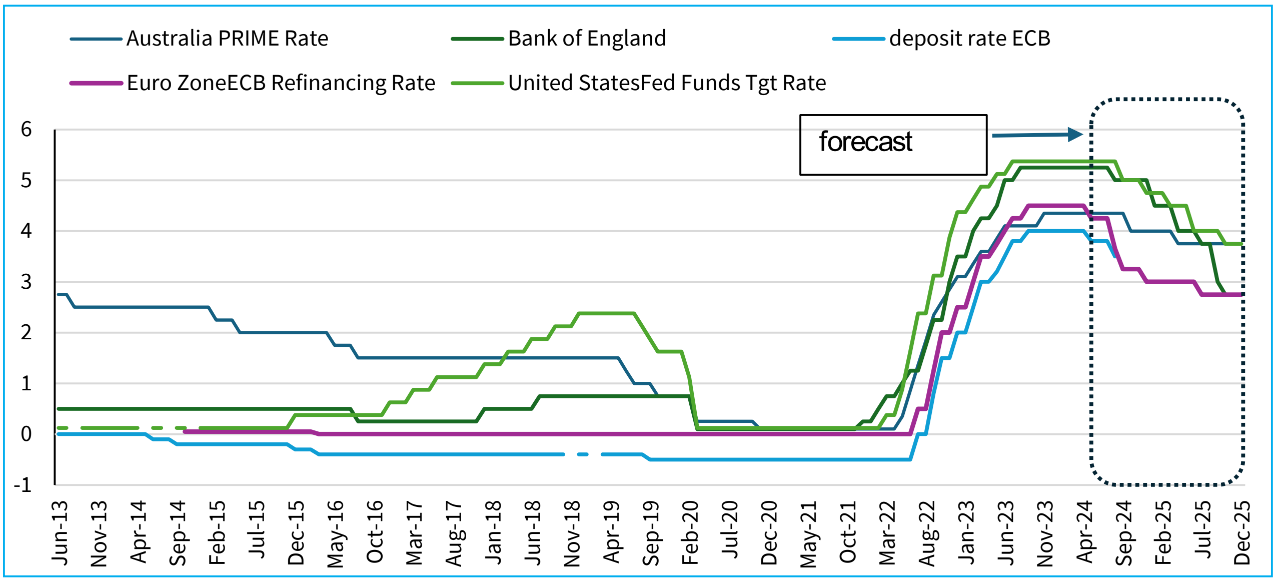
Source: IMF WEO April 2024 and WEO July 2024 Update

Despite the divergence in the growth scenarios, there is consensus that overall global growth remains resilient to multi-shocks environment. It however must navigate the stubbornly high global inflation, which monetary authorities have responded by increasing policy rates, this has resulted into an environment of higher-for-even-longer interest rates.. This is expected to maintain and/or heighten external, fiscal, and financial risks, with EMDEs, being the most affected. The EMDEs with narrowing fiscal space are likely to face limited access to international capital, experience increased debt service costs on their existing debts, high refinancing risks of maturing debt and reduced liquidity. These have implication on their debt sustainability position and financial stability.

Political and policy uncertainties persist, with implication on global economy and financial stability. Escalation in war pitting Israel against Hamas-Iran-Houthis-Hezbollah axis, could disrupt global trade on reduced shipping activities and/or increased freight insurance costs, with passthrough in global commodity prices. This could contribute to elevated inflation, thus maintaining interest rates higher for even longer. The expected change in regimes across 60 countries involving more than half of global population including the European Union that hold elections in 2024 is likely to come with a shift in domestic and foreign policies and political uncertainties that may impact global economy and financial sector. The elections are being held amid growing economic and geopolitical strife in many regions particularly the worsening Russia-Ukraine war and the Middle-East conflict. Even in places where incumbent governments have retained power, they did so with significantly less public support than before. For instance, in India and South Africa, the incumbents did not secure outright majority and had to form a coalition Government, which will alter the trajectory of socio-economic policies. Countries that conducted election after COVID-19 pandemic and implemented policies that put fiscal policy to sustainable path as well as contained inflation, have experienced social and political unrest to change the policy trajectory towards lower taxes, employment creation and supporting vulnerable population such as youth, women, the aged and the people leaving with disabilities. In addition, the raging policy debate in countries in electioneering period is more focussed on reducing taxes, less environmental protection, improving living standards and reducing unemployment rates, especially among the youths, emphasis on protectionism to trade and stemming migration. The political changes and the associated policy shifts elevate uncertainty to global economic growth and financial stability.

The supply-chain disruptions following the COVID-19 pandemic, Russia-Ukraine war, the Israel-Hamas-Iran-Houthis-Hezbollah war and U.S-China trade tensions impacted global economy. Global energy and food prices rose, leading to increased global inflation. These triggered central banks of advanced countries to take synchronized monetary policy tightening actions, leading to rapid increase in interest rates in 2023 **(Figure 2).**

Figure 2: Selected advanced economy central bank policy rates

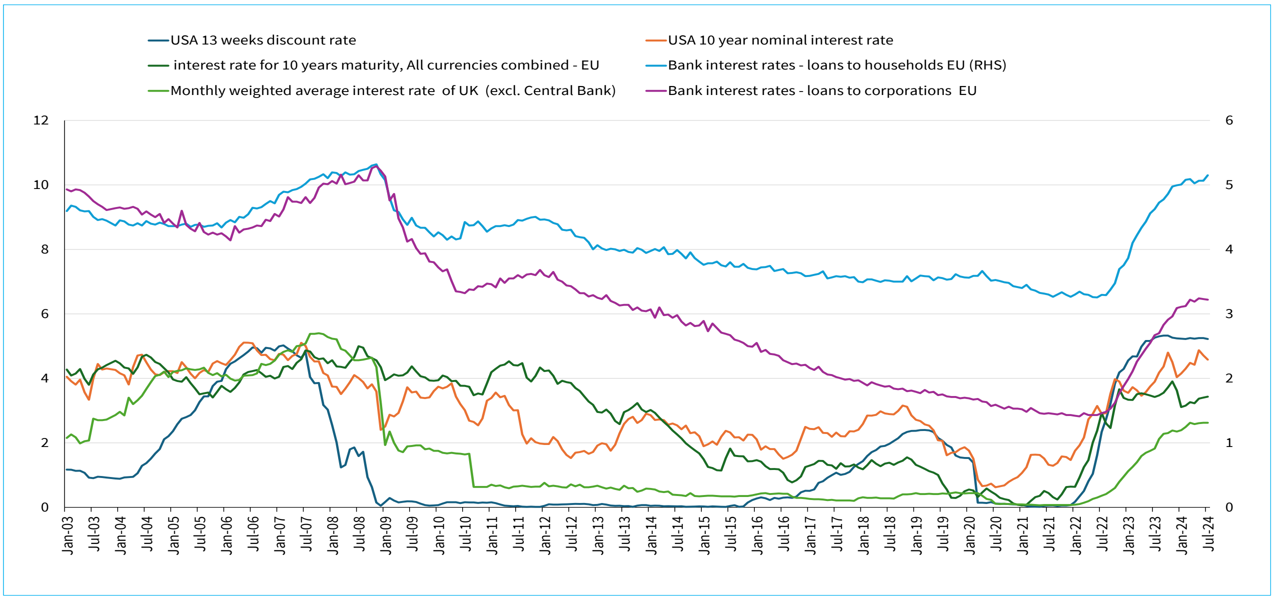


Source: LSEG DataStream, Bloomberg, Allianz Research

The monetary policy actions by central banks in advanced economies continue to percolate through economies, delivering the desired outcomes in muting inflation, but there are unintended consequences. The strong monetary policy actions reversed the upward inflation back to the target ranges across many advanced countries as well as in EMDEs. The EMDEs bore the greatest brunt given their narrow fiscal space, less developed financial markets and already vulnerable economies. The rapid increase in interest rates following central banks actions came with financial stability concerns, especially in the first quarter in 2023. The financial institutions that heavily anticipated a continuation of very low interest rates to meet their funding needs, were the heaviest casualties. The short time of adjustment provided very little room for these institutions to identify new funding sources, hence coming under severe liquidity stress. Widespread positive real policy rates (excl. Eastern Europe) signify effective fight against inflation.

Prior to 2023, global financial markets were characterised by a long period of very low interest rates, depressed volatility, and ample liquidity. These had been supported by strong and persistent expansionary monetary policy in the advanced economies. In post-2008 global financial crisis, many market players had been heavily exposed to liquidity, duration, and credit risk. This created a conducive environment for heightened vulnerabilities to the overall financial system. As inflation pressures set in, conditions reversed following monetary policy actions, that culminated in elevated risks in 2023 and 2024H1 (April 2024 GFSR). Consequently, Central banks in advanced economies activated their monetary policy actions, triggering rapid increase in policy rates with pass-through to other interest rates **(Figure 3)**.

Figure 3: Interest Rates Trends in Select Advanced Countries



Source: Refinitiv

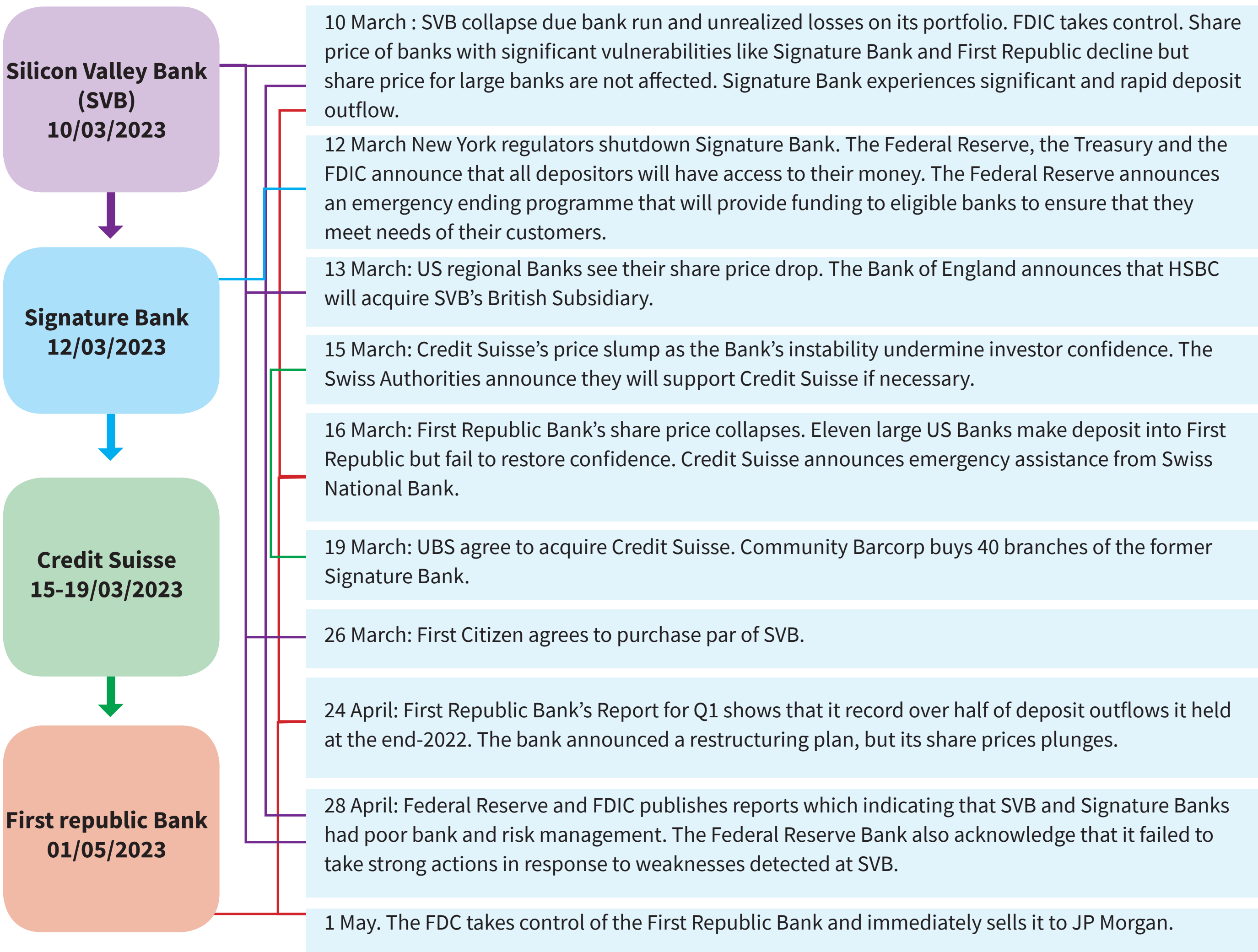
As interest rates rose faster, concerns over the stability of the global banking system emerged. The banking system-induced stress by monetary policy tightening first surfaced in the U.S banking system in the first quarter of 2023 but lingered on with more bank failures in 2023 and one bank in 2024[1] after close to 15 years of stability. Three of these banks- Silicon Valley Bank, Signature Bank, and First Republic, failed in just a few days apart, indicating a realisation of the vulnerabilities that had been building up. The failure of the regional banks in the U.S, such as Silicon Valley Bank (SVB), and forced acquisition of Credit Suisse by UBS in Europe raised concerns about the resilience of the banking system in a regime of high interest rate.

[1]Banks that closed operations in 2023 include Signature Bank, Silvergate Capital, Silicon Valley bank, First Republic bank, Heartland Tri-State bank, and Citizens bank of Sac City. The Republic First Bank failed in 2024.

Prior to 2023, many banks had accumulated substantial amounts of government bonds and largely relied on the debt market to fund their assets. The rapid increase in interest rates and subsequent tightening of financial conditions pushed these banks to liquidate the bonds, which were mostly held under Held to maturity (HTM) and Available for Sale (AFS), to fund their increased liquidity needs. This resulted into realisation of significant mark-to-market losses, eroding profitability and eventually their capital base. In addition, rapid interest rate hikes, not only increased demand for corporate deposits to meet liquidity needs, but also reduced ability to service existing loans. The rising demand for deposits among customers combined with increased default rates on loans led banks to increase liquidity. This became challenging in the already tight financial conditions. The sale of bonds at deep discounts to meet this liquidity pressures led to major losses and eventual closure of banks that were mostly vulnerable.

Technology has also emerged as one of the most important accelerators in driving risks. The sudden withdrawal of bank deposits accelerated by digital technology contributed to the failures of Silicon Valley Bank, Signature Bank, and First Republic Bank in the United States and Credit Suisse in Switzerland in 2023 **(Figure 4)**.

Figure 4: Timeline of How Banking Crises Unfolded in March - May 2023



Source: https://www.bde.es/wbe/en/noticias-eventos/blog/que-hemos-aprendido-de-las-crisis-bancarias-de-2023.html

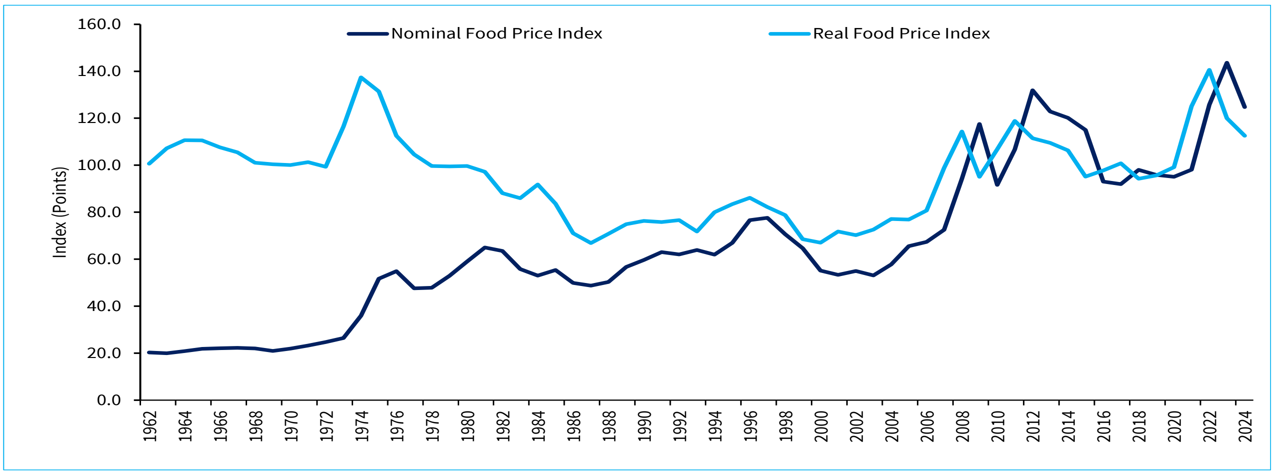
The use of social media to spread rumours and ability to quickly access deposit withdrawals with the click of a button in mobile apps contributed to the speed with which customers moved their money out of the banks, especially those thought to be facing challenges. Banks which were highly exposed to technology startup companies that saw their deposits rise rapidly when tech stocks and start-up valuations rose during an era of cheap money when interest rates were low, came up stress as interest rates rose sharply. For instance, SVB could not predict sudden rise in deposits; Interest rate hikes; and effects of monetary policy on startup spending. In fact, SVB and Signature Bank had a narrow customer base as they focused on banking risky niche industries, start-ups, technology, life sciences and cryptocurrencies. This business model exposed banks to the risk bank runs if the niche industry were to collapse. For example, Signature Bank reported digital asset-related client deposits reached $16.52 billion, approximately 18.65 percent of the $88.59 billion total deposits as of December 2022.

The banking crisis in the USA and Europe, tight financial conditions and volatility in the EMDEs led to assets sell-offs, reflected in large discounts on bond and equity prices as capital outflows from these regions reached the highest. This was followed by historic depreciation of national currencies in emerging and developing economies, introducing inflationary and debt risks. Efforts by authorities in these countries to deploy monetary and financial sector policies bore minimal fruits given the already limited headroom for fiscal interventions. Market access economies facing tight fiscal constraints were not able to easily access international financial markets to borrow to address the fiscal needs and support. Sovereign debt distress also set in, with EMDEs becoming most vulnerable.

Climate change related risks and macroeconomic structural challenges remain unaddressed and could impact global food production and future food prices. While the FAO nominal and real Food Price Indices (FFPI) have declined steadily to 126.85 points and 125.22 points in June 2024 from 143.65 points and 126.55 points, respectively in 2022, they are still above the pre-COVID-19 levels **(Figure 5)**.

The overall decline in global food prices could partly be on account of the UN-brokered deal with Russia that allowed passage of Ukraine grain through the Black Sea, increase in seasonal supplies of maize and wheat from USA, Argentina and Brazil. The FAO Vegetable Oil Price Index recorded the largest decline in 2023, reaching the lowest level since November 2020 due to subdued global import demand.

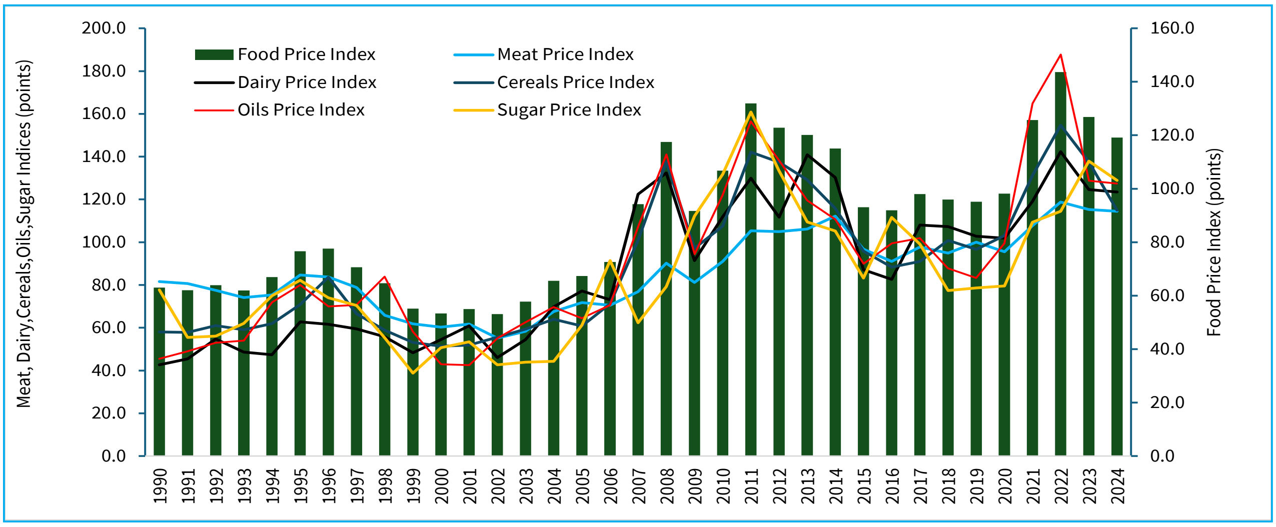
Figure 5: FAO Food Price Index (2014-2016 = 100)



Source: FAO

The FAO Sugar Price Index increased by 0.3 points in real terms and 23.5 points in nominal terms in the first six months of 2023. The 2023/24 sugarcane harvest in Brazil and a sluggish global import demand, particularly from China, eased the international sugar prices into the 2024H1. In addition, impact of El Niño phenomenon along with the strengthening of the Brazilian Real against the United States dollar, could offset price fall **(Figure 6).**

Figure 6: Annual Nominal Food Price Indices (2014-2016 = 100)



Source: FAO

Overall, global trade is projected to be sluggish in 2024 on account of weak demand, rising trade barriers and the lagged effects of US dollar appreciation in 2023 and 2024. Geoeconomic fragmentation into geopolitical blocs is expected to negatively impact growth, including through its effects on foreign direct investment as trade disputes and resultant restrictions hinder free movement of goods and services as well as capital.

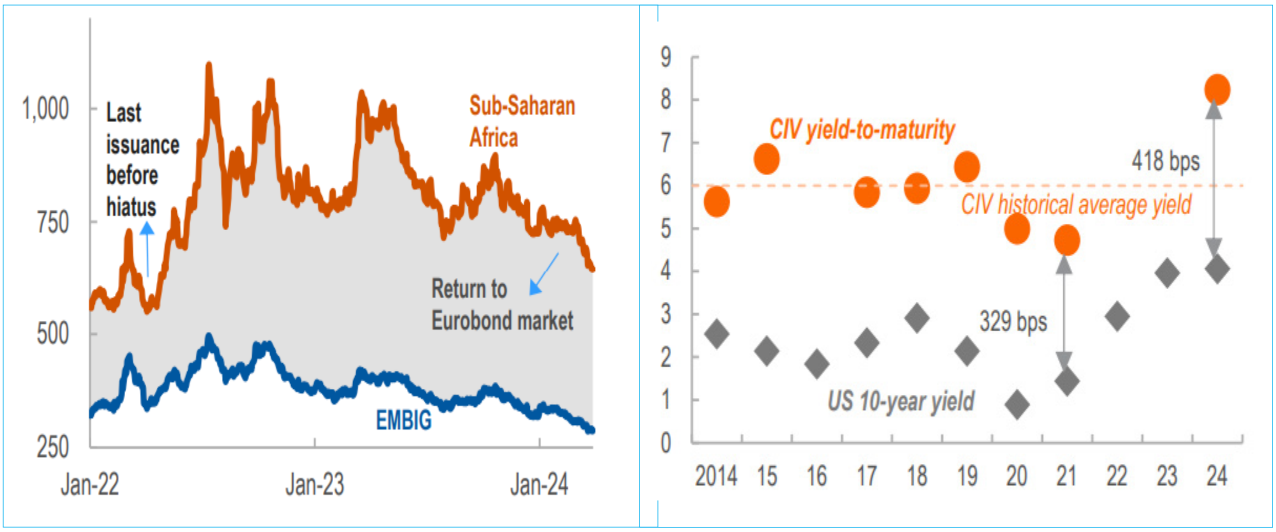
Emerging market economies (EMEs) were generally resilient to new and legacy problems, but the region's currencies came under pressure in some jurisdictions. Overall, EMEs experienced notable depreciation of national currencies, net capital outflows and challenges in accessing international capital markets in response to policy paths of Advanced Economies. Financing costs have increasing significantly, especially for some frontier markets, raising concerns of debt distress. Overall, most EMEs managed to successfully curb inflation while battling higher financing costs and sometimes tense social backdrops. Managing the decline in rates, a weaker dollar and lower twin deficits while benefiting from friend-shoring should prove easier. But policy mistakes and disagreements could derail previous success. Countries such as Egypt, Argentina and Ghana continue to face more hurdles due to large amounts of debt that need to be refinanced at a high cost.

According to the IMF, the Sub-Saharan Africa (SSA) region recorded moderate growth amid funding constraints due to a mix of high global interest rates and depreciation of their national currencies. After four turbulent years, the outlook for sub-Saharan Africa is gradually improving. The region recorded 3.4 percent in 2023, which is expected to rise to 3.8 percent in 2024. Growth across countries ranged between -5.9 percent in Equatorial Guinea and 7.2 percent in Ethiopia, with fourteen (14) countries growing at 5.0 percent and above and only six (6) recording below 1.0 percent growth rate in 2023. Growth is projected to improve further in 2024, with sixteen (16) countries growing at above 5.0 percent and only two (2) with growth projections below 1.0 percent during the period. Economic recovery is expected to continue beyond 2024, with growth projections reaching 4.0 percent in 2025 and only one (1) country with growth of below 1.0 percent. Additionally, inflation has almost halved, public debt ratios have broadly stabilized, and three countries had issued Eurobonds by June 2024, ending a two-year hiatus from international markets . The region's governments continue to grapple with financing shortages on limited Official Development Assistance, high borrowing costs, and rollover risks amid persistently low domestic resource mobilization. The financing challenges are forcing countries to cut essential public spending and redirect development funds to debt service, thereby endangering growth prospects for future generations.

The cost of borrowing on the domestic and international market has increased and remains elevated across many jurisdictions. For instance, in 2023, government interest payments constituted 12 percent of revenues (excluding grants) for the median sub-Saharan African countries, more than doubling from a decade ago. Amid this pressure, sovereign spreads for the region rose three times the level of EMDEs average, albeit easing, since the start of the global tightening cycle **(Figure 7)**.

High borrowing costs and domestic currency depreciation have driven several countries in SSA region into debt distress, partly informing credit rating downgrades in 2024 if the interest rates remain high for longer. Public debt as a share of GDP averaged 60 percent in 2023, the highest since early 2000s when several countries had to be placed under HIPC initiative. The debt situation may worsen with further widening of fiscal deficits on account of multiple crises, slower growth leading to lower revenue mobilization, and exchange rate depreciations. Debt sustainability concerns have increased, with 19 of the region's 35 low-income countries already in debt distress or face high risk of debt distress in 2024 (IMF, April 2024).

Figure 7: Sovereign Spreads for SSA (Basis points, simple average) and African Premium



Source: April 2024 IMF REO, SSA

The region's national currencies, mostly depreciated against the US dollar in 2023, adversely affecting importation of essential commodities, services and intermediate goods. Currency depreciations also contributed to higher general government debt. The region's asset quality of the financial sector deteriorated, with non-performing loans increasing to 10.4 percent in 2023 from 7.5 percent in 2022. Bank profitability rebounded in 2023, but capital adequacy of banks has dipped relative to its pre-pandemic peak in 2019.

The increased external borrowing costs, funding squeeze, push for fiscal consolidation amid socio-political concerns due to slower growth continues to drag Sub-Saharan African economies. This is expected to impact these countries' credit ratings, further limiting their ability to access international markets for the much-needed capital manageable costs. Evidently, the region recorded the lowest Eurobond issuances in 2023, with only Ivory Coast and Kenya.

Further deterioration of business and consumer confidence in key advanced economies could reduce demand for imports and lower commodity prices for the region. Additionally, any increase in global risk aversion could heighten the funding squeeze, which will disproportionately affect SSA. There is also a risk of capital outflow from emerging market and developing economies, putting most on national currencies under exchange rate pressure and in turn, dollar-denominated external debt induced vulnerabilities. High inflation could further delay monetary policy easing, lowering net financial inflows into the region with repercussions on the BOPs pressures.

Further escalation of Russia-Ukraine War, and Israel-Hamas-Hezbollah war could heighten elevated global uncertainty and raise food and energy prices. Geopolitical realignments and geoeconomic fragmentation could negatively impact the region in terms of rising trade barriers and higher food prices. The cost-of-living crisis remains a major concern for the region given the high incidence of poverty. Climate change is also emerging as key to the region amid limited fiscal space for interventions. For instance, cyclone Freddy battered vulnerable families and communities in Mozambique but has limited means for climate adaptation. The region faces limited climate funding despite the huge needs, estimated at about $22 billion in 2020. Policy options to the SSA region should focus on consolidating public finances through a credible and transparent medium-term fiscal policy framework to improve fiscal sustainability and lower debt risks. Additionally, central banks in the region need to adjust the pace of monetary policy tightening to both the level and trajectory of inflation, in close coordination with fiscal policy. The region can put in measures to access the IMF's new Resilience and Sustainability Facility to address longer-term structural challenges, including those posed by climate change.

Risks to the outlook remain tilted to the downside. The region remains vulnerable to global shocks, particularly from weaker external demand, elevated geopolitical risks and geoeconomic fragmentation. In addition, a few countries in sub-Saharan Africa face rising political instability, social unrests on the cost-of-living concerns and frequent climate shocks, especially frequency, coverage and severity of droughts and floods. The region faces a critical year with 18 national elections in 2024 that could come with instabilities if results are disputed and/or change in policies.

The private sector is also experiencing liquidity stress and decline in funding due to higher interest rate higher interest rates. In recent years, local banks have shown a stronger preference to lend to the government than to the private sector. Before the pandemic, banks' exposure to the private sector increased much faster than their exposure to the government, highlighting the region's progress in financial development. In contrast, since the pandemic, private sector credit as a share of bank assets remained broadly unchanged, while lending to the government has seen continued increase. This increasing bank-sovereign nexus could pose financial stability risks in some countries. Three policy priorities can help countries adapt to these challenges: improving public finances without undermining development; monetary policy focused on ensuring price stability; and implementing structural reforms to diversify funding sources and economies. Amid these challenges, sub-Saharan African countries will need additional support from the international community to develop a more inclusive, sustainable, and prosperous future.

The East Africa economies were resilient to inflation and monetary policy tightening to grow at an average of 7.7 percent in 2023 from an average growth of 6.9 percent in 2022. This is on account of strong growth of the service sector and conducive weather, which supported agricultural production. The region's growth is projected at an average of 5.8 percent in 2024, on account of sustained strong performance in Agriculture, global economic recovery, easing inflationary pressures, easing geopolitical tensions and improved financial conditions.

Downside risks to the projected growth in the EAC region include elevated food and energy prices, thus maintaining inflation high, and in turn delaying the Partner States Central Banks to ease their respective monetary policies. The regional national currencies also remain vulnerable to external shocks given the low levels of foreign exchange reserves. Any further shocks leading to currency depreciation could increase the import bill, inflation and public debt. The secondary effects of exchange rate depreciation can also accentuate capital outflow, elevate debt distress and increase cost of public borrowing. Holders of government bonds subject to mark-to-market valuation under IFRS requirement also face unrealized losses than can easily crystalize in the event of liquidity stress.

The banking sector in the EAC region remains resilient to credit and interest rate shocks due to sufficient capital and liquidity buffers-built overtime through retained earnings. In addition, regulators have implemented a wide range of regulatory measures to ensure the sector is well prepared to weather emerging risks. However, monetary policy tightening, and elevated inflation pressures continue to weigh in on credit risk for banks. The NPLs ratios for Rwanda, Uganda, Kenya and Burundi and South Sudan rose significantly in 2023 and remain elevated. A further increase in interest rates and exchange rate depreciation could worsen the financial conditions, intensifying financial markets volatility and reduce access to liquidity by banks and even NBFIs. There is also asset concentration risk in the banking sector, as households, manufacturing, trade and real estate sectors, account for the largest share of credit. A major shock to any of these sectors, could have material impact on the banking sector in the region. Therefore, EAC Partner States should be ready to deploy fiscal, financial, and monetary policy measures to mitigate risks in the medium term if these shocks crystalize. This would enhance growth momentum for economic recovery and enhance stability of the financial sector.

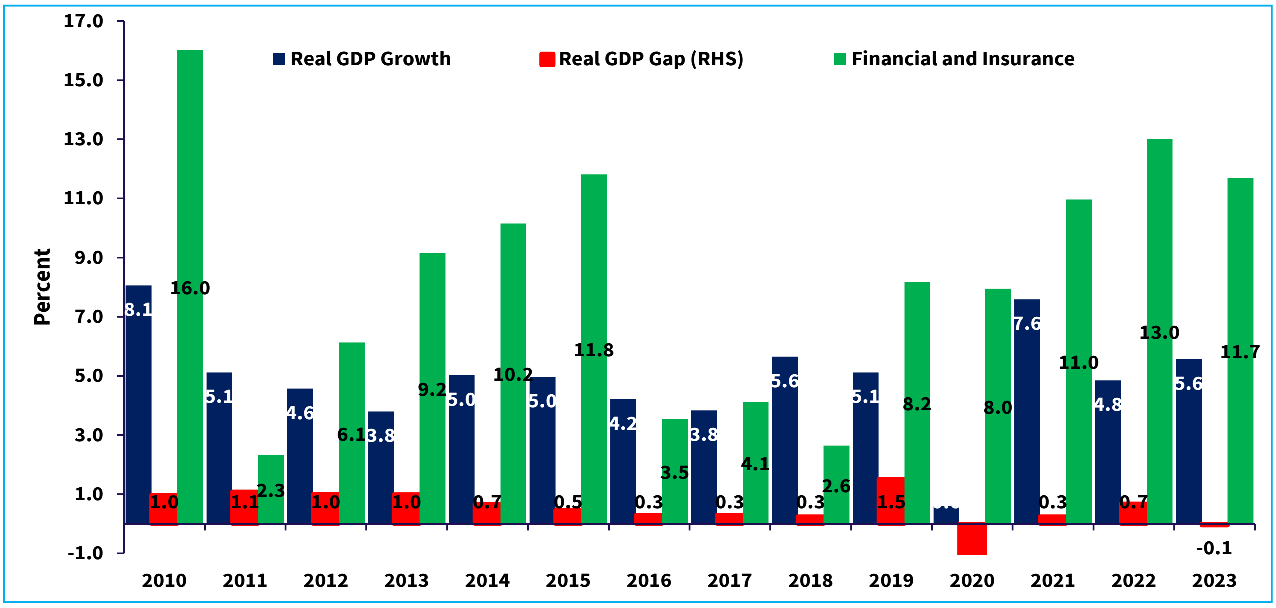
Upside risks to global growth include policies expected to enhance macrofinancial stability, reducing inflation and ensuring that expectations are anchored through steady but ready monetary policy. This should be supported by clear communication; careful monitoring of risks, managing market strains, and strengthening oversight to address any vulnerabilities early enough; managing market strains through targeted liquidity support; strengthening oversight to address any supervisory gaps to ensure sufficient capital and liquidity to moderate interest rate risk and overall banks' risks; normalizing fiscal policy to bring deficits and debts below the pre-pandemic levels and align it to support monetary policy; and restoring debt sustainability.

Overall, a careful policy balancing between stemming inflation through tightening policy rates and maintaining accommodative monetary policy is needed for sustained economic recovery and financial stability. The EMDEs remain vulnerable to a disorderly tightening of global financial conditions. However, further rate increases, should continue but consider country specific inflation and economic outlook. Additionally, fiscal prudence in economies with high inflation, high debt level and tightening financial condition is urgent. But fiscal support to those part of the population and firms affected severely by high inflation and in the sectors where recovery was already weaker remains critical, hence striking a balance between containing vulnerabilities and avoiding procyclicality lingering risks growth prospects. The banking system stress in 2023Q1 also calls for monetary policy actions to consider the sovereign–bank nexus to avert potential vulnerabilities and ensure overall financial system stability.

1.2 Domestic Economic Conditions and Risks

The domestic economy performed better in 2023, growing by 5.6 percent, 0.7 percentage points compared to 4.9 percent growth in 2022. Key drivers to this rebound were strong performance of the services sector, mainly finance and insurance, and implementation of Government measures to boost economic activity in priority sectors under the Bottom-Up Economic Transformation Agenda (BETA) **(Figure 8)**.

Figure 8: Kenya's Economic Performance

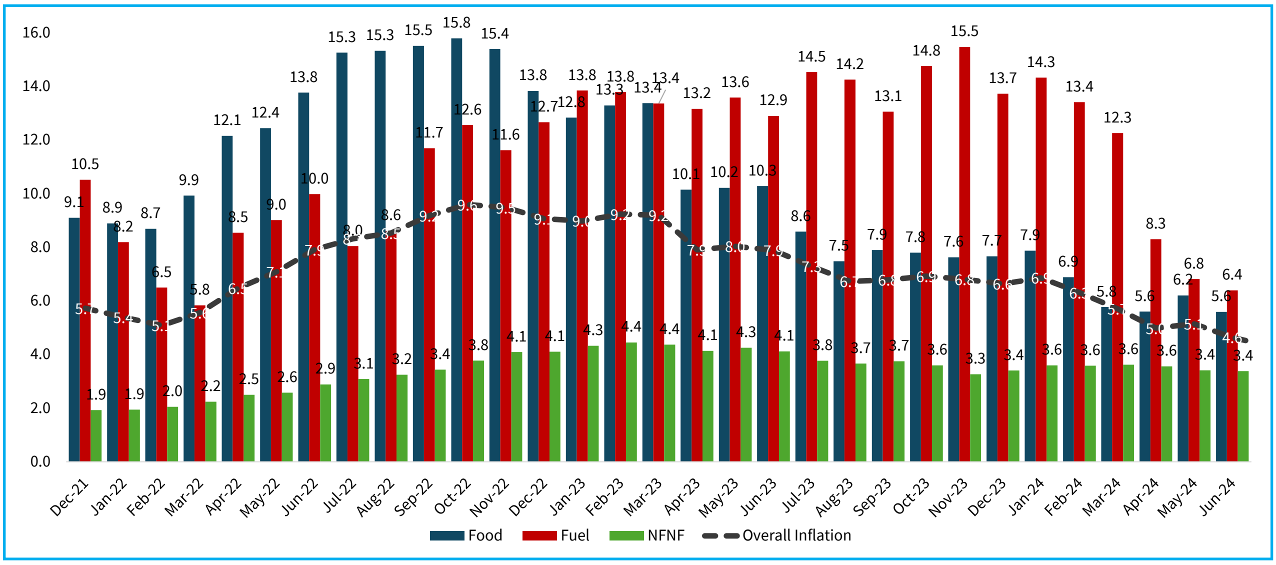


Source: staff computation

Despite conducive weather conditions and supportive policies, the economy faced elevated costs of production due to high inflation and energy prices, tight financial conditions, delays in government payments to suppliers, and lack of fiscal support to the vulnerable groups. Economic growth in the first half of 2024 decelerated to 5.0 percent and 4.6 percent in 2024Q1 and 2024Q2 compared to 5.5 percent and 5.6 percent in a similar period of 2023. The slowdown is mainly attributed to subdued performance of industrial sector, particularly construction sector which contracted by 2.9 percent in the second quarter of 2024.

Kenya's economy is projected to remain resilient in 2024 and 2025. Real GDP is projected to grow by 5.1 percent in 2024 and 5.5 percent in 2025, supported by robust growth of agriculture and key service sectors. This growth is, however, dependent on developments in domestic and global commodity prices, monetary policy stance, fiscal consolidation, and credit market conditions. Additionally, should the ongoing geopolitical conflicts trade tensions worsen, it could disort supply chain, which could constrain the smooth flow of global trade, impacting negatively on supply of cereals, fertilisers, metals, oil, and other intermediate commodities. As a result, commodity prices could remain high, inflation being above targets thus delaying easing policy as anticipated **(Figure 9).** This could reduce purchasing power and increase vulnerabilities in the financial sector. Policymakers must stand ready with proactive measures to support a vibrant economy that creates jobs, ease cost of living concerns, and enable households and firms to borrow for investment and service their existing loans, thus reducing loan delinquencies.

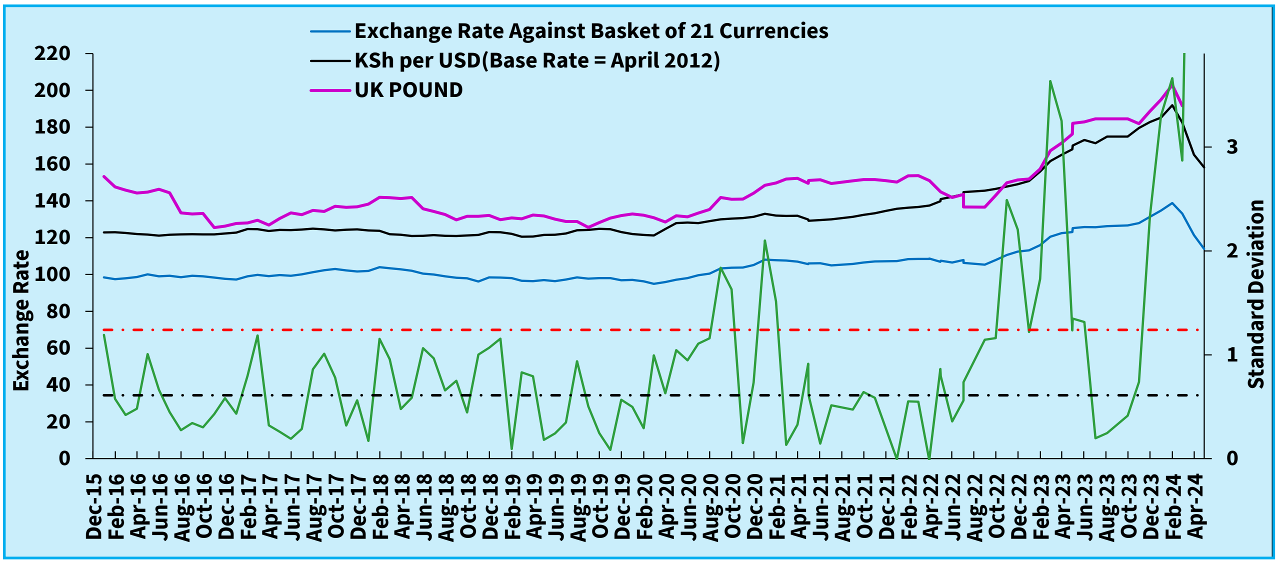
Figure 9: Evolution of Inflation (Percent)



Source: CBK

The Kenya shilling, like other regional currencies, depreciated in 2023 and first quarter of 2024 as advanced countries tightened monetary policy rapidly, leading to faster increase in other global interest rates. This triggered portfolio outflows from EMDEs, with low-income countries being most affected. With no new flows and significant outflows **(Figure 10).**

Figure 10: Kenya Shilling Exchange Rate



Source: Staff Computations

Exchange rate depreciation was compounded by increase in imports and speculation. However, the shilling appreciated strongly beginning February 2024 on monetary policy tightening, successful issuance of Eurobond and strong subscription in the local currency infrastructure bond by foreign investors. In addition strong diaspora remittance flows of USD 397.3 million in the year to April 2024 compared to USD 320.32 million in the year to April 2023 also supported exchange rate appreciation. The Expected pause in monetary policy tightening in advanced economies, steady flow in diaspora remittances, recent financial markets reforms, prudent and well-coordinated fiscal and monetary policies are expected to support further stability of the Kenya Shilling against major international currencies.

Private sector credit recorded annual growth rate of 13.9 percent in the year to December 2023, 1.4 percentage points higher than the growth rate for similar period in 2022, but has since declined significantly in first half of 2024, to 4.0 percent in June 2024 (Table 1). The main sectors driving credit growth in 2023 compared to 2022 were Finance and Insurance, Manufacturing, Real Estate and Trade. These four sectors accounted for 47.7 percent of the total private sector credit in 2023. The rollout of credit risk pricing models by banks, strong growth in deposits and economic recovery partly explain the improved private sector credit growth. Lending was well distributed across sectors, with five out of the total twelve accounting for 59.6 percent of the total share of Private Sector credit, which imply less credit concentration risks. However, shocks to manufacturing, trade and households could put about 46.9 percent of total lending under stress directly, but the share is expected to increase further through sectoral interconnectedness.

The strong monetary policy tightening and elevated credit risks has slowed down credit to the private sector, with annual growth declining from 13.9 percent in December 2023 to 4.0 percent in June 2024, after adjusting for the impact of exchange rate depreciation. All sectors, except mining & quarrying and households recorded much slower growth rate in June 2024 compared to June and December 2023.

Table 1: Annual Growth in Credit to Private Sector (Percent)

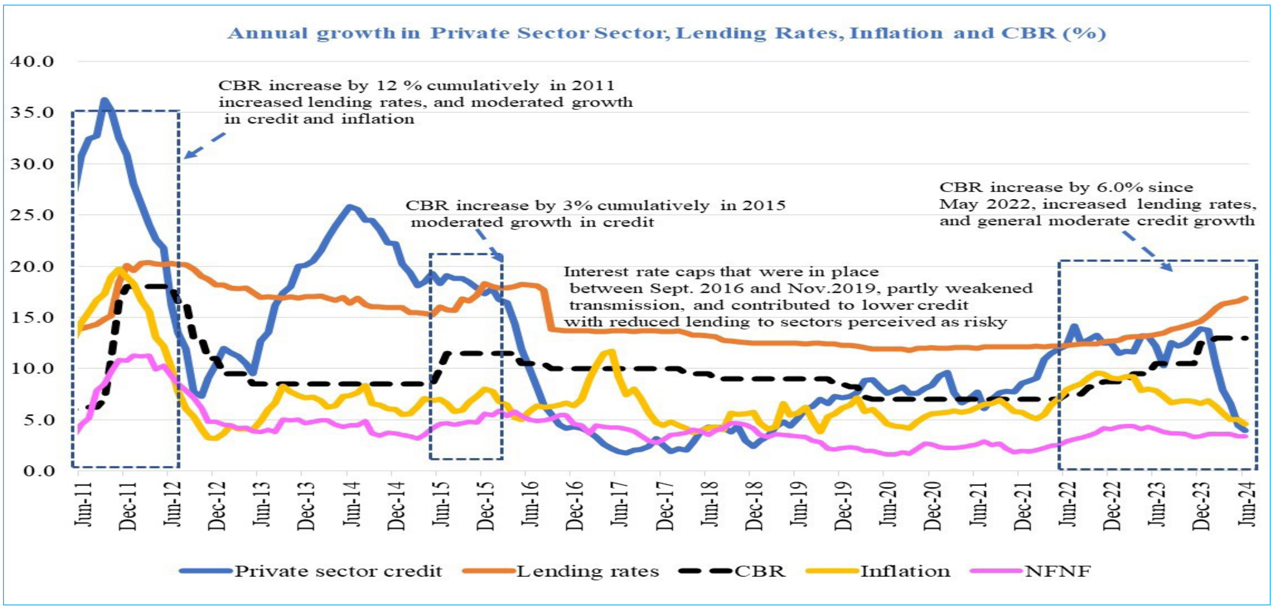
Sectors	%Share of Total Credit in April-24	12-month growth in Private Sector Credit (%)									
		Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Apr-24
Agriculture	**3.0**	7.7	12.5	17.0	22.3	14.9	19.4	15.5	22.5	15.9	14.1
Manufacturing	**12.8**	9.9	15.2	14.2	13.8	15.8	18.0	22.0	20.8	9.5	4.3
Trade	**14.2**	10.4	11.6	16.4	11.4	11.9	9.2	6.7	12.5	5.7	4.2
o/w domestic trade	**12.9**	9.6	12.8	16.7	10.6	11.1	8.4	6.3	12.7	6.5	5.0
Building & construction	**3.1**	6.4	13.9	12.5	8.2	5.8	3.8	8.1	8.7	0.6	5.5
Transport & communication	**7.7**	25.0	22.2	21.6	23.5	17.4	19.6	18.3	20.5	6.7	9.3
Finance and insurance	**3.5**	3.6	6.5	0.2	7.6	28.4	29.9	40.7	60.1	12.9	6.1
Real estate	**9.6**	0.5	0.5	0.1	3.2	2.3	3.4	7.2	6.8	4.9	5.1
Mining & quarrying	**0.7**	-4.9	28.5	57.4	31.3	83.2	24.5	21.1	15.0	34.0	26.6
Private households	**26.7**	7.5	6.1	7.8	8.2	7.2	10.9	10.4	7.4	19.6	10.8
Consumer durables	**8.9**	15.6	14.7	14.4	12.9	12.7	12.7	10.6	9.9	6.3	5.5
Business services	**4.4**	14.7	15.2	12.5	13.7	9.3	12.1	11.5	7.6	6.8	-0.4
Other activities	**5.3**	60.5	57.2	53.8	41.8	11.9	8.3	4.6	18.4	27.1	25.4
Total Private Sector Credit	**100.0**	**10.9**	**12.3**	**12.9**	**12.5**	**11.6**	**12.0**	**12.2**	**13.5**	**11.5**	**7.8**

Source: CBK

The inflation pressures triggered stronger monetary policy response by the Central Bank in the second half of 2023 (Figure 11). Cumulatively, the CBK raised its policy rate by 600 basis points between May 2022 and January 2024, with highest increase of 250 basis points taking place between June 2023 and January 2024. The period coincides with high inflation and increased exchange rate volatility. The impact of the policy actions is still filtering in the economy, as reflected in the decline in the private sector credit growth in the first half of 2024, which is tending towards the level witnessed in 2016-2017 in the aftermath of the banking sector instability and interest rates controls. The impact of monetary policy tightening and exchange rate appreciation as well as tightening lending standards to address the elevated credit risk is expected to further slowdown lending to private sector to the rest of the remaining period in 2024.

The Central Bank initiated reforms in the interbank market in July 2023 to align the interbank rate with the Central Bank Rate (CBR). This entailed establishing the corridor of 2.5 percent within which the interbank rate can fluctuate around the CBR. The upper and lower limit of the interbank rate was reduced from 2.5 percent to 1.5 percent around the CBR.

Figure 11: Trends in Annual Growth in PSC, Lending Rates and CBR (Percent)

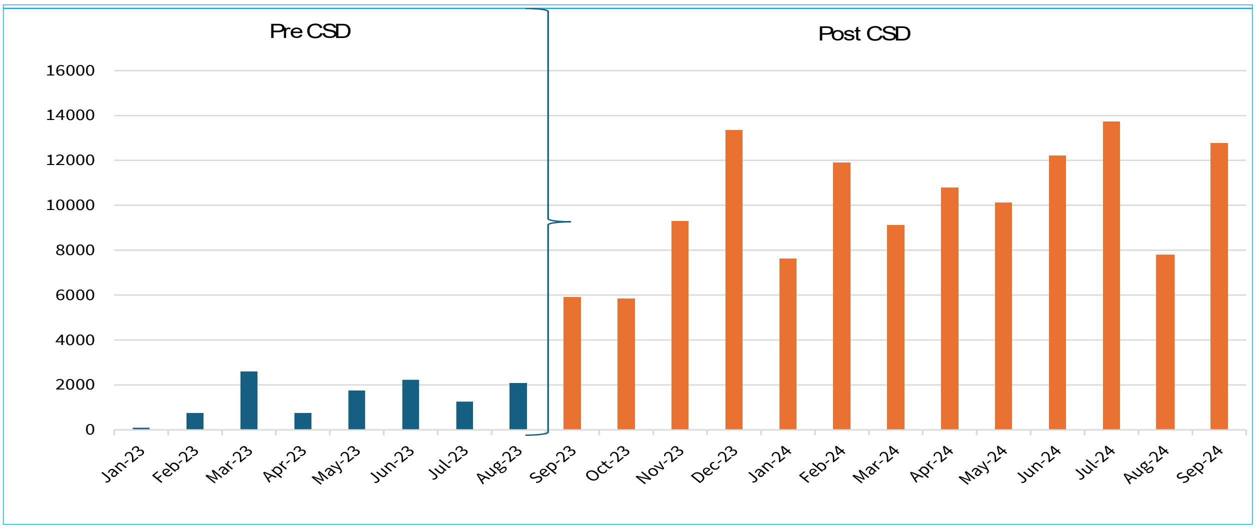


Sources: CBK

The Bank also reduced the, haircut on government securities pledged as collateral from 10 percent and 20 percent for Treasury bills and bonds to 2 percent for instrument that mature within one year, 5 percent for 1- 10 years and 30 percent for 10- 30-year maturities. The reduction of the interbank rate corridor to closely align the interbank rate to the CBR strengthened the transmission of monetary policy stimuli to the interest rates in the economy. This also aligns the interbank interest rate to the discount window rate, which enhances transparency and efficiency in liquidity management in the banking sector and encourages financial institution to seek funds from the CBK as a lender of last resort.

The horizontal repos market has undergone transformation leveraging on the *DhowCSD* such that collateral can pass to the lender. This has increased interbank transactions, enabling financial institution to effectively manage their liquidity as well optimise on liquidity holdings.

Figure 12: Implementation of Dhow CSD has contributed to Horizontal Repos Market

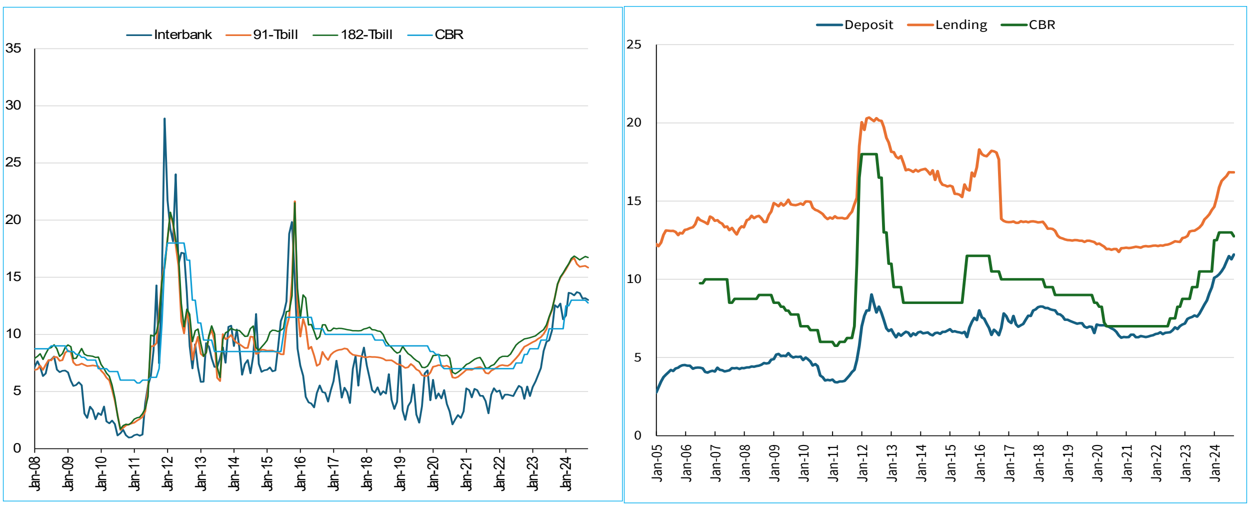


Sources: CBK, Financial Markets

The rollout of DhowCSD introduced flexibility with collateral transfer among counterparties, thus improving liquidity access. Interbank market has responded well, with transactions on the collateralised market (Horozintal Repos market) collateralized market increasing from KSh 2 billion in August 2023 to KSh 140 billion in July 2024, and maturities ranging from overnight to 32 days. This has enabled banks to manage liquidity through the interbank market using government securities, which has reduced counter party, liquidity and market risks.

Persistently high interest rates experienced in 2023 and first half of 2024, reflect the tight monetary policy to stem inflationary risks and increase in the fiscal deficit financed by domestic borrowing. These have led to increase in banking lending and deposit rates. In addition, banks raised deposits rates to historical high of above 12 percent to attract and retain deposits, which were facing competition from high rates offered on treasury bills and bonds **(Figure 13)**.

Figure 13: Trends in Key Interest Rates (Percent)



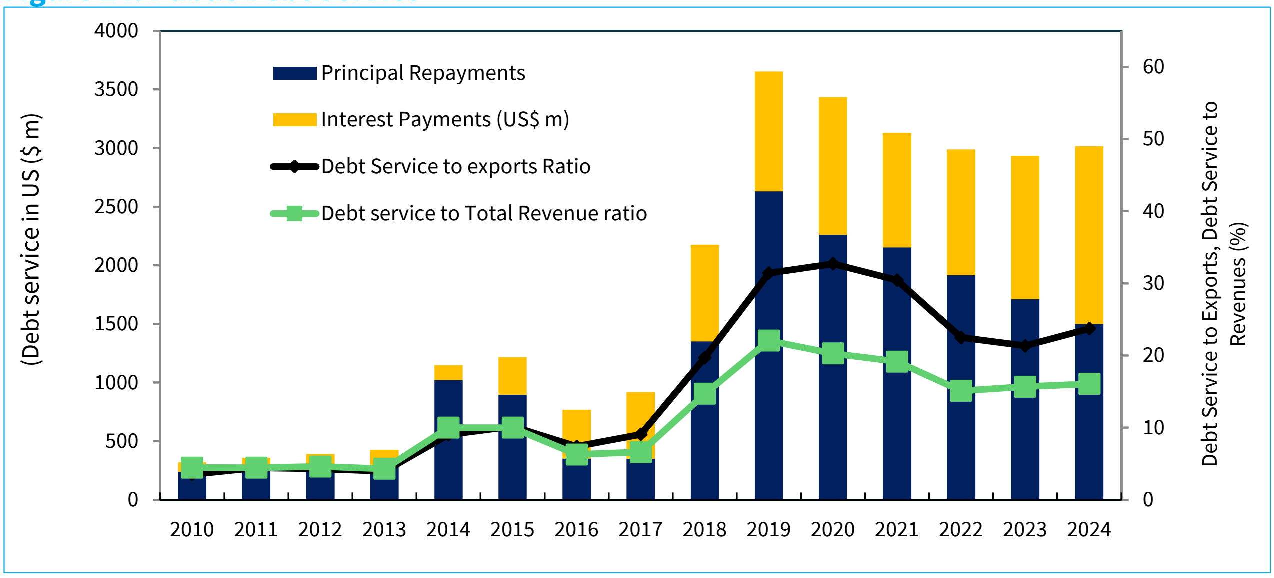
Sources: CBK

The fiscal space narrowed in 2023 and the first half of 2024 on account of reduced revenues and increased external debt repayment. The ratio of debt service to exports and debt service to total revenue increased to 41.3 percent and 28.0 percent, respectively, in FY 2023/2024 from 22.6 percent and 16.6 percent in FY 2022/2023. The increase in interest and principal repayments in FY 2023/2024 reflect the impact of local currency depreciation on external debt. In the FY 2024/25 the Government is implementing fiscal consolidation programme to attain a fiscal deficit of 3.5 percent of GDP. This together with other reforms, is expected to increase sustainability of public debt.

Despite high interest rates, the government was able to fully meet its domestic borrowing targets in 2023. The interest rates on treasury bills increased from an average of 9.04 percent to 12.55 percent in December 2023 and 16.52 percent in June 2024. Similarly, yields on treasury bonds increased from an average of 12.46 percent in 2022 to an average of 13.56 percent in 2023 and 16.28 percent in the first half of 2024.

Despite increase in the yields, banks, pension funds and insurance companies preferred investing in low-risk assets and risk-free government securities in the primary market due to increase in real return and elevated credit risk as reflected in the rising non-performing loans. The securities issued were subscribed on average by 155.7 percent in 2023 up from 113.1 percent recorded in 2022. However, there was pressure to suppress increase in coupon rate as reflected by decline in average bids-to-cover ratio (accepted bids to offer amount) to 1.24 in 2023 from 1.4 in 2022. Auctions were however fully covered, which lowered financing risk.

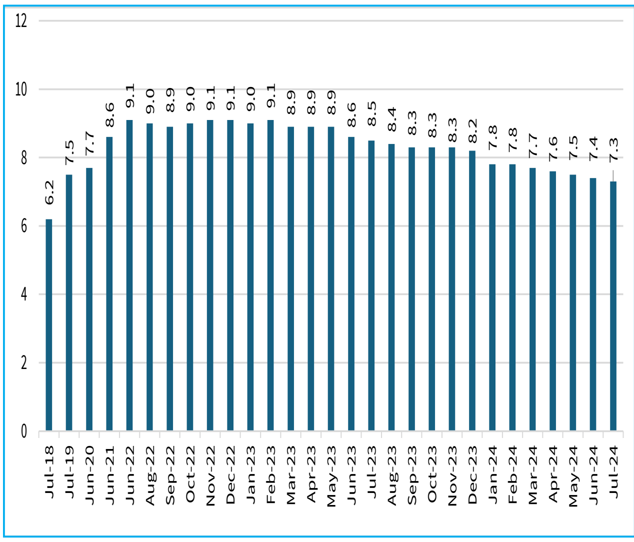
Figure 14: Public Debt Service



Sources: CBK

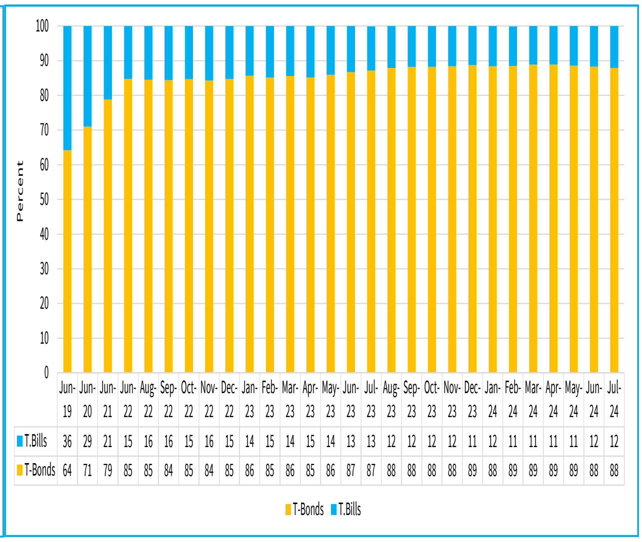
Refinancing risk for domestic debt remains low in line with the 2022-23 medium term debt strategy targets (MTDS), but it is increasing. The average time to maturity (ATM) for government bonds has declined to 7.4 years in June 2024, from 8.2 years in December 2023 and 9.1 years in December 2022, indicative of low appetite for long-dated instruments that are highly impacted negatively by rising interest rates. The relatively high level of ATM indicates low refinancing risks of domestic debt, which contributes to overall financial stability **(Figure 15).**

Figure 15: Average time to maturity for Government securities (Years)



Sources: CBK

Figure 16: Ratio of Treasury bills to Treasury bonds



Sources: CBK

The ratio of Treasury bills to Treasury bonds of 11: 89 in December 2023 compared to 12: 88 in June 2024 also shows low refinancing risk **(Figure 16)**. This is an important outcome of the Medium-Term Debt Strategy in addressing refinancing risks. It has however come with higher debt servicing costs associated with high interest rates on dated debt securities.

The long-dated bonds often carry higher coupon rates to attract investors, and deal with the concerns of high duration risks. This is normally reflected in outward shift and upward slopping yield curve. If this occurs, those holding large amounts of long dated bonds with low coupon rates, would incur paper losses due to mark to-market valuation, which could be materialized in the event such bonds are sold to cut losses or address temporary liquidity stress facing the holder. If such holders are banks, the losses reduce profits and ultimately, erode capital. Hence banks avoid long dated securities with low coupon rates during periods of high interest rates risk.

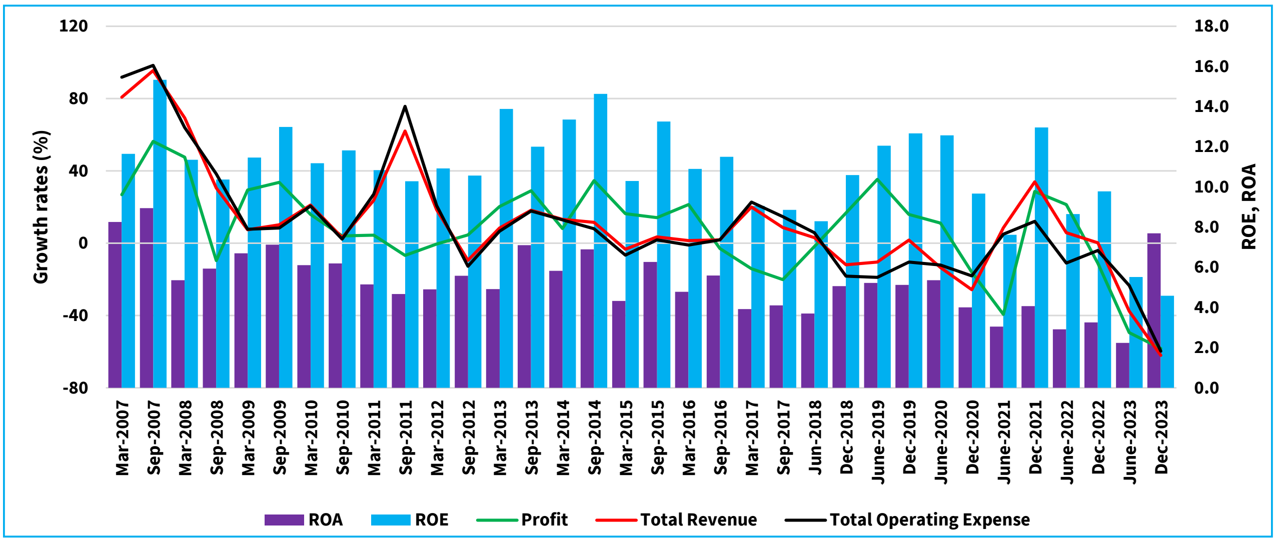
The yields on the Kenya Government Eurobonds also increased akin to the yields on the domestic secondary bonds market (Figure 17). The yields on Kenya's Eurobonds were volatile and increased in the second half of 2023 and in the first quarter of 2024 as investors were concerned about Kenya's ability to repay the bond maturing in June 2024. In addition, high interest rates, inflation pressures perceived weak Kenya's fiscal position and tight financial conditions in major financial markets, increased Kenya,s risk profile. However, following the successful buyback of the Eurobond in February 2024, and the strong demand for local currency infrastructure bond by foreign investors due to high and non-taxable coupons, and investor confidence in the propensity of the government to implement sustainable fiscal and monetary policies.

Figure 17: Eurobonds Yields

Sources: CBK

The NSE listed non-financial corporates recorded further decline in profitability in 2023 due to tight financial condition, decline in purchasing power, increase in the cost of production and of inputs due to inefficiencies in the supply chain and unfavourable taxation (Figure 18). Profitability of the non-financial corporates listed on the NSE declined by 58 percent in 2023 compared with an increase of 6 percent in 2022.

Figure 18: Profitability of NSE Listed Non-Financial Companies



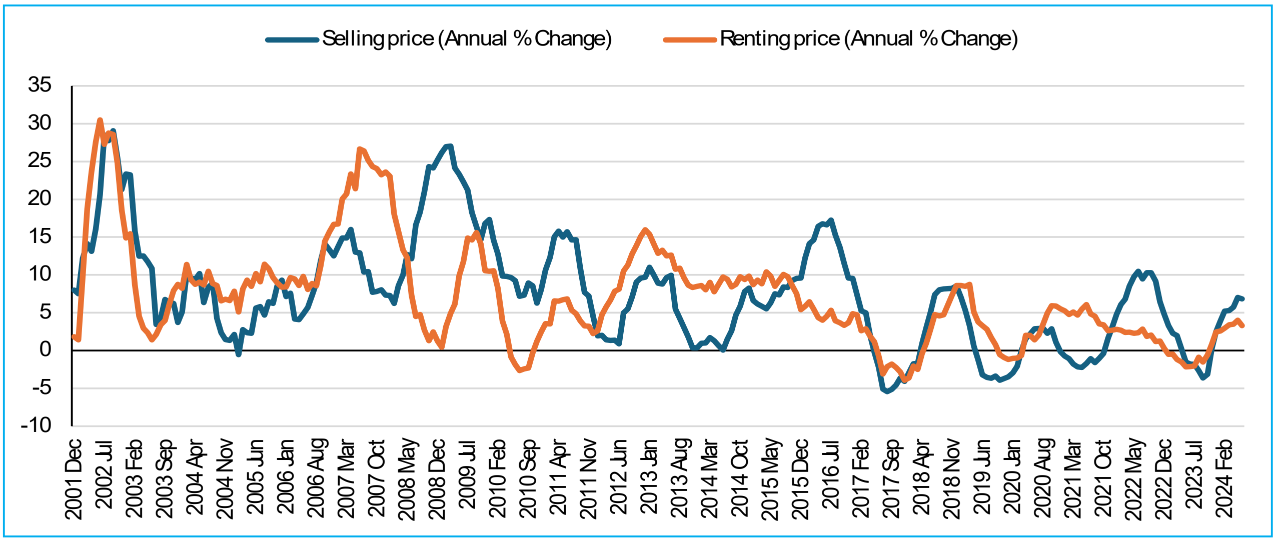
Sources: NSE database

The operating costs by firms increased faster than revenues on account of reduced purchasing power by households, high energy costs, exchange rate depreciation and competition from cheap imports. However, a total of 9 listed companies issued profit warnings in 2023 compared to 13 in 2022, but way below the historical high of 18 companies in 2025. A firm is required by the NSE to issue a profit warning if its annual profits decline by at least 25 percent from the previous year. Declining revenues, liquidity, and profitability increases indebtedness of firms, which not only reduces their ability to service existing debt, but also reduces chances of accessing credit on favourable terms from financial institutions.

The real estate remained subdued for two consecutive years to 2024, partly reflecting low demand for commercial and residential units as some organizations moved to virtual offices (Figure 19). The situation has been compounded by rising interest rates have made mortgages more expensive. The sales, purchases, rental, and occupancy rates of residential, office, retail, and hospitality, slowed in 2023 and in first half of 2024 compared to 2022 due to decline in demand and increasing shift from office to working from home and selling online.

Despite slowing rental prices, the shift from shops and malls to online and from office to online and homes, continued in 2023 and 2024, reducing footfall in the domestic chain stores and demand for office space. Furthermore, slow growth in income may partially be the reason behind households renting more apartments than detached and semidetached. Reduced uptake of new property has made it difficult for developers to sell their units, contributing to increase in credit risk in the real estate sector.

Figure 19: Hass Property Indices (Y-o-Y percentage Change)



Sources:Hass Consult Ltd Reports

Building and construction also faced subdued demand in 2023 and first half of 2024, decelerating to 3.0 percent in 2023 from 4.1 percent in 2022, and further decline is projected in 2024. The construction price index increased from 4.16 points December 2022 to 7.1 points in December 2023, due to the increase in the cost of fuel, BRC mesh, steel reinforce and cement. Supply of new units was tilted towards apartments but less supply of commercial space, office space, detached and semi-detached and detached houses during the period. The low demand of commercial, detached, and semidetached houses is reducing ability of the real estate and construction sectors to repay their loans. As a result, lenders slowed financing construction projects to mitigate underlying risks.

Overall, the economy is projected to be resilient in 2024 and 2025, but to grow below potential on account of downside risks arising from global and domestic shocks. The narrow fiscal space, high debt levels, tightening monetary policy and liquidity in the international and domestic financial market lack of consensus on political issues including Governance and reforms, taxes and public spending may slowdown growth in the second half of 2024 and 2025. Additionally, tightening of lending standards by banks.

2. FINANCIAL SECTOR DEVELOPMENTS AND RISKS

Kenya's financial consists of banking, capital markets, insurance, pensions and Savings and Credit Cooperatives (SACCOs) sectors. These sectors are licensed, regulated and supervised by the CBK, CMA, IRA, RBA and SASRA, respectively. In 2023, and first half of 2024, various policy measures and other interventions ensured that the sector remained resilient to legacy and new shocks. Kenya's financial sector has undergone significant transformation in terms of size, sophistication and interconnectedness in the recent past, mainly driven by technological innovations. While financial soundness indicators for banks, SACCOs, insurance and pension funds have improved, the indicators for microfinance banks and capital markets deteriorated in 2023. The Microfinance banks incurred losses for five consecutive years, while the NSE experienced over the last five years **(Table 2).**

Table 2: Select Indicators for the Financial Sector

Sectors	Indicator	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Banking	Total Assets (KSh Mln)	4,832.3	5,420.1	6,008.0	6,537.4	7,690.7
	Profits Before Tax (KSh Mln)	159.9	112.8	195.4	240.4	219.3
	Non-Performing Loans (Mln)	333.4	424.1	426.8	503.2	641.3
	Core capital (Mln)	639.1	692.5	757.3	809.1	893.6
SACCOs	Total Assets(KSh mln)	555.9	630.9	700.3	764.2	981.5
	Gross Income(KSh Mln)	80.2	84.5	96.5	105.6	140.9
	Non-Performing Loans (KSh Mln)	25.9	32.9	35.4	48.4	44.4
	Core Capital (KSh mln)	95.1	100.4	119.6	142.3	162.3
Insurance	Total Assets (KSh Mln)	705.8	761.3	845.8	943.7	1,063.8
	Profit Before Tax (Mlns)	16.1	12.8	8.8	14.2	19.7
	Total Equity (KSh Mlns)	163.9	169.2	173.1	186.6	202.6
Pension	Total Assets(KSh Mlns)	1,298.2	1,399.0	1,547.4	1,576.2	1,725.4
	Overall Risk Score (points)	3.10	3.15	2.98	2.96	2.94
Microfinance Banks	Total Assets (KSh Mln)	77,171.1	75,430.1	75,138.1	70.4	64.2
	Profits Before Tax (KSh Mln)	(0.2)	(2.9)	(0.7)	(1.0)	(2.4)
	Non-Performing Loans(KSh Mlns)	10.0	13.4	12.9	14.2	11.9
	Core Capital (KSh mln)	9.0	5.8	6.5	6.8	4.6
NSE	NASI Points (End Period)	166.4	152.1	166.5	127.5	92.1
	NSE 20 Points (End Period)	2,654.4	1,868.4	1,902.6	1,676.1	1,501.2
	Market Capitalization KSh Bns	2,540.0	2,336.7	2,592.9	1,986.1	1,439.0
	Equity Turnover KSh Bns	153.82	148.68	137.41	94.29	88.23
	Foreign Purchase (KSh Mln)	106.7	81.5	72.7	38.8	26.6
	Foreign Sales (KSh Mln)	105.3	110.1	82.9	63.2	47.9
	Ave. Foreign Investor Participation to Equity Turnover (%)	68.9	64.4	56.6	54.1	42.2
	Total Bond Turnover KSh Bns	651.68	691.83	956.97	741.85	644.00

Source: CBK, CMA, IRA, RBA, and SASRA

2.1 Banking sector, Mortgage Finance Companies and Microfinance Banks

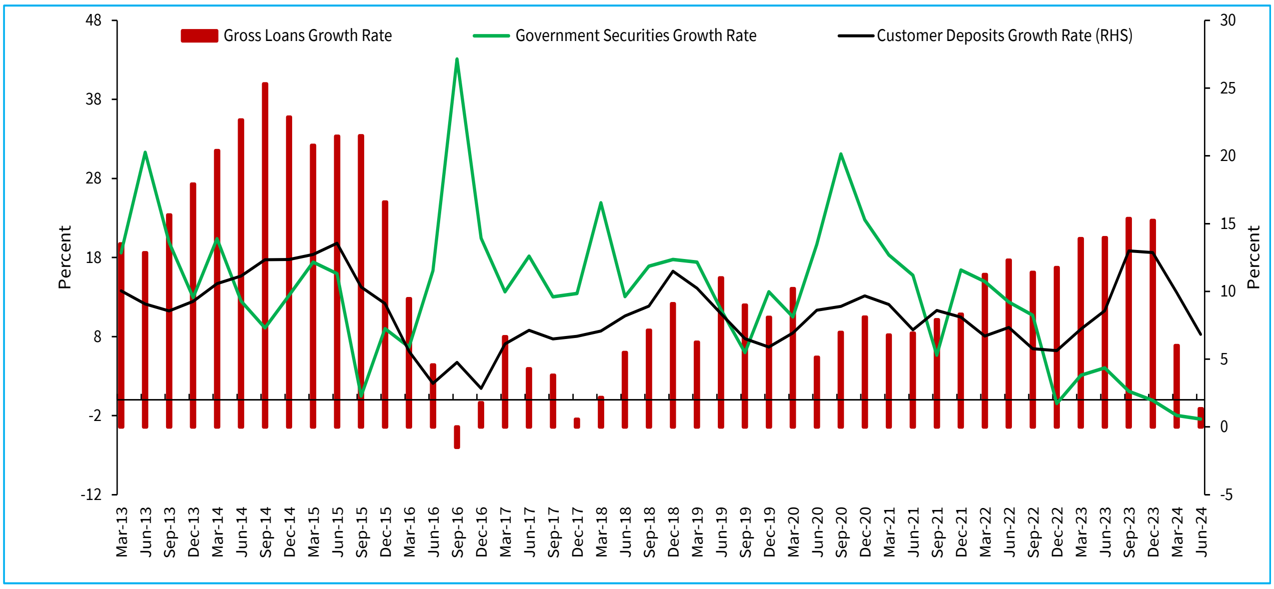
Kenya had thirty-eight (38) commercial banks, one (1) mortgage finance company and fourteen (14) deposit taking microfinance banks (MFBs) in 2023 and the first half of 2024, all regulated by the Central Bank of Kenya.

2.1.1 Banks and Mortgage Finance Companies

The banking sector had strong capital and liquidity buffers enabling it to withstand elevated market and credit risks in 2023. The sector's core and total capital increased to KSh 893.63 billion and KSh 1,075.80 billion in December 2023, from KSh 809.06 billion and KSh 954.65 billion, respectively, in December 2022. The ratio of Core Capital and Total Capital to Total Risk Weighted Assets (TRWA) declined to 15.4 percent and 18.6 percent in December 2023, from 16.0 percent and 18.9 percent reported in December 2022, respectively. The slight decline in the ratios reflect a slow build-up in capital compared to Total Risk Weighted Assets, mainly attributed to a decrease in earnings. However, the ratios were above the minimum statutory core and total capital requirement of 10.5 percent and 14.5 percent, respectively, implying that banks have adequate capital buffers to absorb emerging and legacy shocks to sustain lending. However, banks in the large peer group recorded a decline in total and core Capital adequacy ratios due on reduced profitability that slowed down build-up in capital through retained earnings.

The total net assets[3] of banks grew by 16.7 percent, from KSh 6,589.8 billion in December 2022 to KSh 7,690.7 billion in December 2023 **(Figure 20)**. The main driver of growth in net total assets of banks was the strong growth in net loans and advances, which accounted for 49.4 percent of the total net assets in 2023. The net loans and advances grew by 14.5 percent in 2023 compared to 2022. The strong growth in loans and advances is very important for financial stability as it supports earnings, critical for capital build up.

Figure 20: Balance Sheet Growth Dynamics (percent)



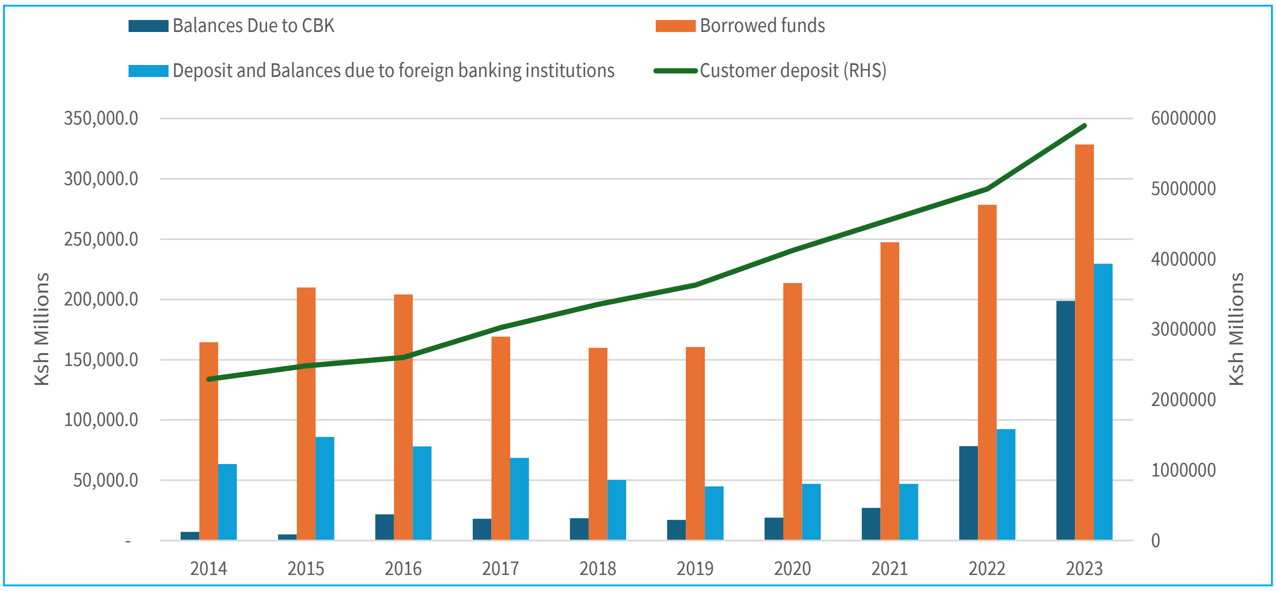
Source: published audited bank data

Balances due from institutions abroad, grew strongly to KSh 516.2 billion in 2023 from KSh 164.1 billion in 2022 reflecting the impact of exchange rate depreciation during the year and better return on deposits on account of increase in interest rates. However, banks reduced investment in government securities from 0.1 percent from KSh 1,884.1 billion in 2022 to KSh 1,882.9 billon in 2023.

[3]Refers to loans and advances to customers net off provisions

Growth in aggregate liabilities was mainly on account of strong growth in balances due to Central Bank, deposits and balances due to foreign banking institutions, borrowed funds and customers deposits, which accounted for 94.7 percent of total liabilities **(Figure 21)**. Customer deposits were the key funding base for bank assets, which grew by 17.5 percent to KSh 5,595.8 billion in December 2023 from KSh 4,761.7 billion in December 2022. Besides the strong growth in deposits, banks also recorded strong growth in Borrowed funds and liquidity from the Central Bank. For instance, balances due to Central Bank increased by 153.5 percent, to KSh 198.8 billion in 2023 from KSh 78.4 billion in 2022. Similarly, borrowed funds increased by 17.9 percent increase, to KSh 328.5 billion in December 2023 from KSh 278.5 billion in December 2022. There was also significant growth in deposits and balances due to foreign banking institutions, which may partly reflect the impact of Kenya Shilling depreciation against the USD during the period and Government to Government oil import arrangements.

Figure 21: Trends in Banking Sector Funding Sources



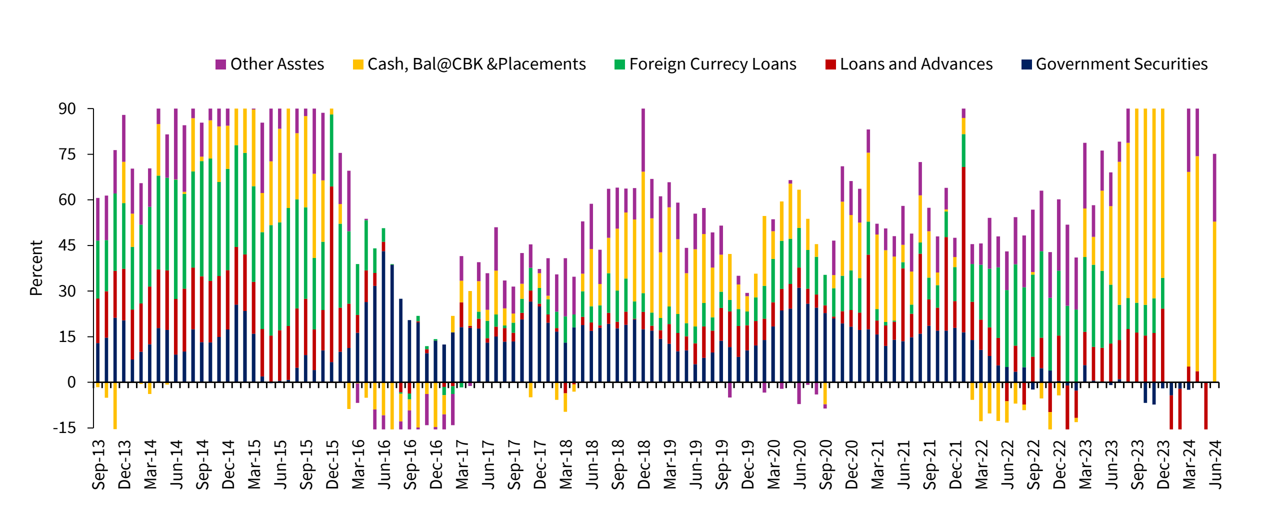
Source: published audited bank data

The significant growth in other funding sources despite the steady growth in the customer deposits may indicate the volatility and short-term nature of the deposits that may not adequately fund long term assets. It may also indicate that banks invested in long term assets and therefore resorted to other sources of funding to bridge the maturity mismatches, especially during high interest rates. Any slowdown or reversal in these funding sources amid slow growth in deposits, could pose liquidity risks to the banking sector, if high interest rates persist. High interest rates pushed banks to offer high deposit rates to attract and/or retain deposits. The faster increase in deposits rates against moderate increase in lending rates has compressed interest rate margin, thereby reducing interest income, which accounts for over 80 percent of income. Persistence compression of interest rate margins reduces overall profitability and viability of the banking sector.

Assets composition of the banking sector has evolved in the recent past reflecting policy and other developments that impacted the economy and the sector **(Figure 22)**. Prior to the

COVID-19 pandemic, banks faced two major shocks; the 2015-16 bank instability[4] that led to the regulator's intervention with 'New Normal' policy measures to restore stability and a parliamentary legislation that introduced Interest Rates Capping law in 2016, but later repealed in November 2019 due the interest rate controls having undesired effects. During this period, banks cut down on lending to minimize losses arising from mispricing credit risk. Instead, banks invested heavily in the government securities to avoid lending at the restricted interest rates as stipulated in the law.

Figure 22: Assets Decomposition by Growth Rates (percent)



Source: CBK Staff computation from published financial statements.

The repeal of Interest Rates Capping Law in November 2019 jump-started new lending to the private sector. This was supported by implementation of risk-based credit pricing models after obtaining approval by the Central Bank. The models were part of the core pillars of Banking Sector Charter, besides the customer-centricity, which prioritised transparency in credit pricing. However, before lending recovery could gather momentum, COVID-19 outbreak was declared a global pandemic in the first quarter of 2020, leading to shut down of the economy. Banks responded to this shock by migrating to purchase of Government securities, considered safe for value preservation[5]. In addition, many businesses and households were not borrowing to invest or expand their operations due to containment measures deployed to limit the spread and impact of COVID-19, which affected supply chains and overall consumption.

As the COVID-19 pandemic effects started dissipating and normalcy returned, consumer confidence and demand for credit increased. Production capacity that had been impacted negatively during COVID-19 pandemic however could not match the demand. Rising demand amid slow production capacity amid excess liquidity in the market due to accommodate monetary policy augmented inflationary pressures, beginning 2022. This prompted the Central Bank to unwind financial and monetary policies, then started raising monetary policy rate. As a result, the second half of 2023 experienced faster than anticipated increase in interest rates

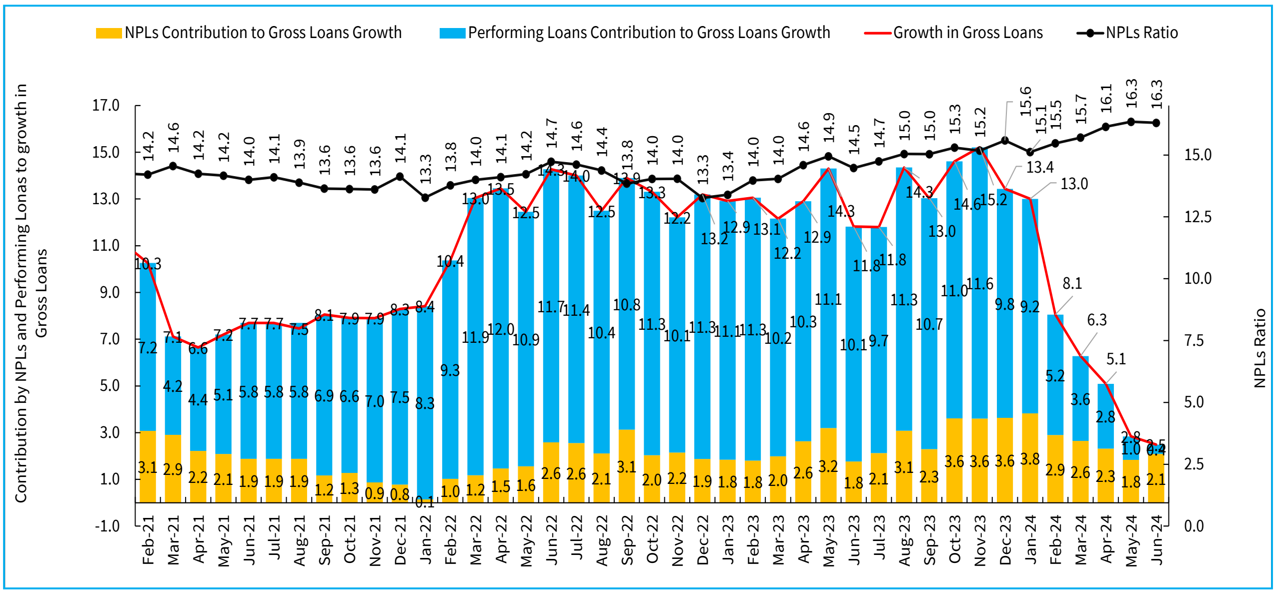
[4]Characterized by collapse of Dubai Bank, Imperial Bank and Chase Bank between September 2015 and April 2016.
[5]Yields on governments fell too low due to accommodative monetary policy and other liquidity support but banks cared more about safety rather than return.

to stem the rising inflation. Commercial banks began reducing their investment in government securities to minimize marked-to-market losses associated with repricing of interest rate-sensitive assets, mainly long-term government bonds. The long-term term government bonds that had been issued at very low interest rates were the most affected, recording large discount prices. This is made it difficult for the banks to sell them to avoid losses, thus making them less liquid as collateral to access liquidity support from the central bank through collateralized reverse repurchase agreements.

The rapid monetary policy tightening abroad followed by capital outflows from EMDEs led to weakening of domestic currencies against currencies of advanced countries. The Kenya Shilling was not an exception**.** As a result, the rapid depreciation of the Kenya Shilling against major international currencies, especially the US Dollar prompted banks to hold more foreign currency denominated assets. Balances held by domestic banks with foreign financial institutions increased by over 800 percent in 2023 compared to a decrease of 23.9 percent in 2022 mainly main to facilitate oil imports. In addition, the foreign currency denominated assets increased in value because of depreciation of the Kenya shilling against the US Dollar.

The rising interest rates, delayed public sector payments to suppliers, supply chain disruptions that mostly affected manufacturing sector, and elevated inflation that reduced disposable incomes for households largely explain the assets quality deterioration 2023. The ratio of non-performing loans to gross loans (NPLs) increased from 13.9 percent in December 2022 from 15.6 percent in December 2023 and 16.3 percent in June 2024. The contribution of NPLs to gross loans from 1.9 percent in December 2022 to 3.6 percent in December 2023, indicating that NPLs grew faster relative to the increase in performing loans. This indicates that borrowers are facing difficulties in repaying their, loans, wile banks are tightening lending standards to mitigate credit risks **(Figure 23)**.

Figure 23: Loans Growth by Contributions



Source: CBK 2023 Banking Sector Credit Risk Stress Test

While the growth in NPLs in the period under review are increased, the, growth rate is lower compared to the growth rate in the period leading to and during the 2015-16 banking sector stress **(Table 3)**. The actual NPLs consistently recorded an annual growth rate of above 30 percent from 2013, reaching the peak of 52.8 percent in 2016 at the height of banking sector instability. The NPLs growth rate of 29.5 percent in 12 months to December 2023 and 14.1 percent in 12 months to June 2024, is lower than the 2016 level. The easing inflationary pressures, stable local currency, expected easing of monetary policy and prudence in lending are expected to moderate NPLs growth. The downside risks, including fiscal consolidation and other fiscal challenges may elevate NPLs in the remainder of 2024.

Table 3: NPLs annual Growth Rates

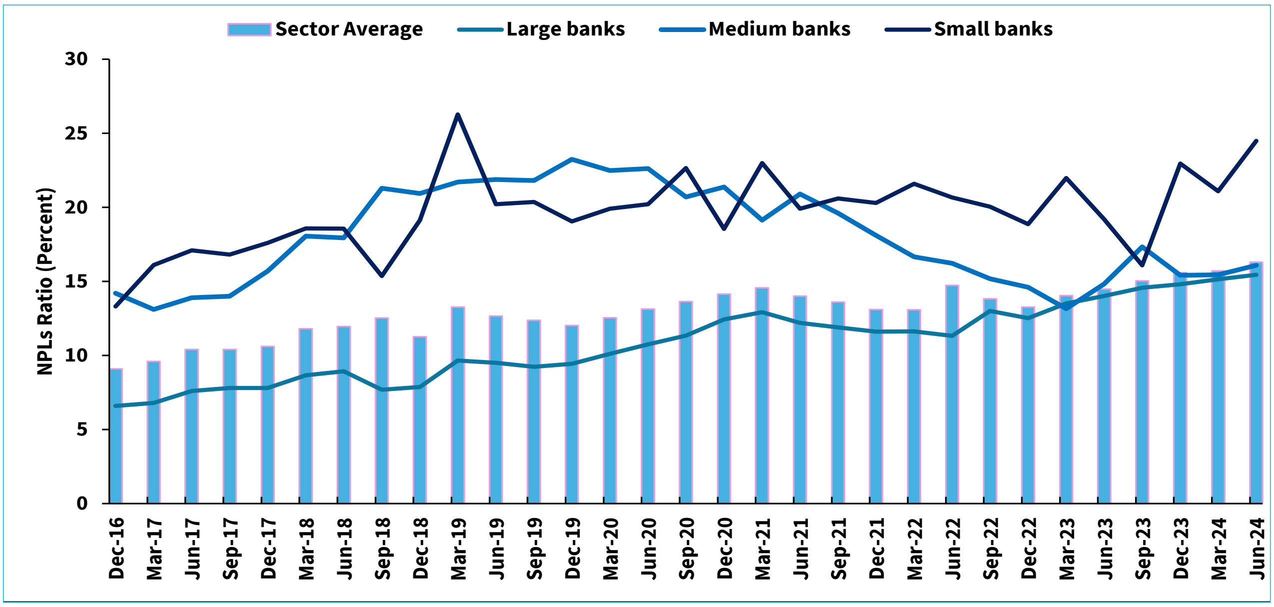
INDICATOR	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
Gross Goans (KSh Mln)	1,605.2	1,972.1	2,299.1	2,340.0	2,353.3	2,567.3	2,774.6	2,999.5	3,248.7	3,630.3	4,183.4
Gross NPLs (KSh Mln)	80.6	107.1	139.4	212.9	252.6	308.8	333.4	424.1	426.8	503.2	651.8
Gross loans Growth (%)	17.9	22.9	16.6	1.8	0.6	9.1	8.1	8.1	8.3	11.7	15.2
Gross NPLs Growth (%)	30.9	32.9	30.1	52.8	18.7	22.2	8.0	27.2	0.6	17.9	29.5
NPLs Ratio (%)	5.0	5.4	6.1	9.1	10.7	12.0	12.0	14.1	13.1	13.9	15.6

Source: CBK

Kenya's banking sector is categorized into small (Tier III), medium (Tier II) and large (Tier I) peer groups in terms of their market share. As of December 2023, there were 22 banks in small peer group, 8 banks in medium peer group and 9 banks in large peer group. In terms of combined weighted market share, the Tier I banks accounted for 76.6 percent, Tier II banks accounted for 15.0 percent while Tier III banks accounted for 8.4 percent in 2023.

In terms of total net assets, Tier I banks accounted for 76.97 percent, Tier II banks accounted for 14.63 percent while Tier III banks accounted for 8.4 percent in 2023. These differences also reflect the heterogeneity of assets quality. As of December 2023, banks in the large peer group had the lowest average NPLs ratio of 14.8 percent from 12.5 percent in December 2022. Banks in Tier II had an average NPLs ratio of 15.4 percent in December 2023 compared with 14.6 percent in December 2022 while banks in small peer group saw their NPLs ratio above the sector's average of 15.6 percent in December 2023 **(Figure 24).**

Figure 24: NPLs ratio by bank peer groups

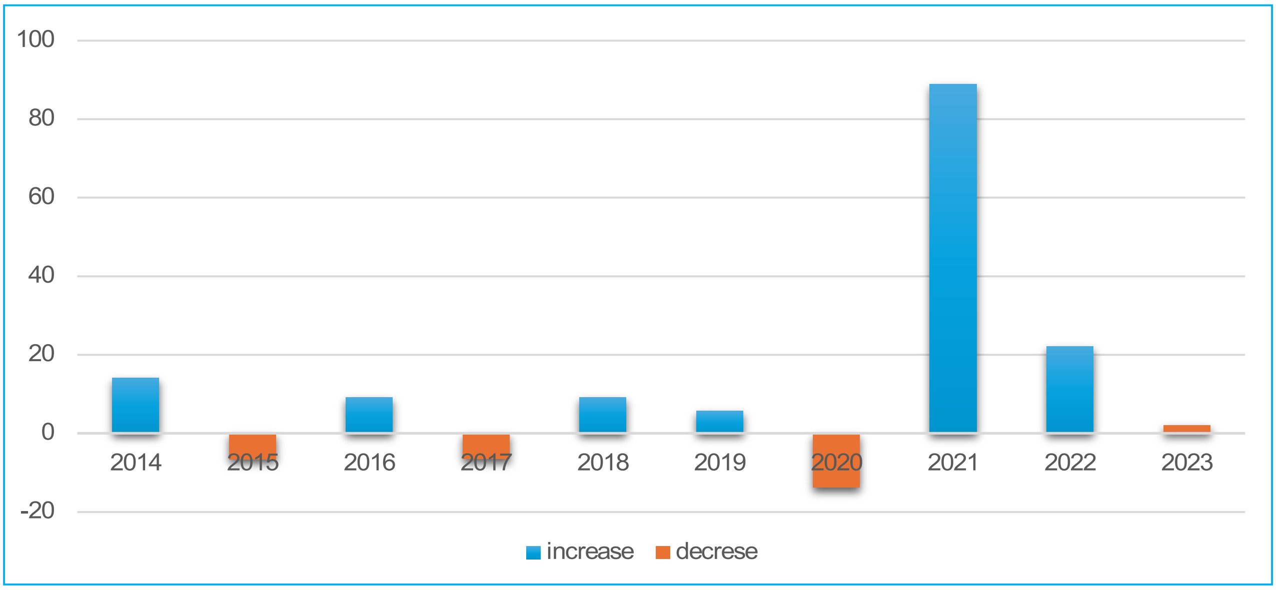


Source: CBK staff computation

Growth in NPLs was mainly driven by Mining and Quarrying, Financial Services, Tourism, Restaurant and Hotels, Manufacturing and Real Estate sectors. In terms of the share of total NPLs of KSh 651.81 billion, Tier I banks accounted for 75.7 percent, Tier II banks accounted for 11.6 percent while Tier III banks accounted for 12.7 percent in 2023. Despite the large NPLs, banks generally have the ratio of specific provisioning to NPLs (coverage ratio) for large and small peer groups decreased from 45.8 percent and 43.5 percent in December 2022 to 44.4 percent and 37.5 percent in December 2023, reflecting reduced earnings. These banks therefore need to grow their earnings and deal with bad loans in the medium term to ensure stability. The coverage ratio for banks in the medium peer group increased from 47.8 percent in December 2022 to 49.0 percent due to improvement in earnings. Banks in the large peer group had the highest proportion of PBT and Capital and reserves, accounting for 84.5 percent and 74.6 percent of the total KSh 219 billion and KSh 981 billion, respectively in December 2023. Although banks in Tier II and Tier III had low PBT of KSh 30 billion (13.7 percent) and KSh 4 billion (1.8 percent), their capital and reserves of KSh 158 billion (16.1 percent) and KSh 90 billion (9.3 percent) are adequate to cover the NPLs and continue lending by end of 2024.

The challenging business environment, increase in interest rates, decline in purchasing power and deterioration in the quality of asset contributed to the decline in Profits before tax in 2023 (Figure 25). The annual audited Profits before tax declined by 8.8 percent in 2023 to KSh 219.3 billion, from KSh 240.4 billion in December 2022.

Figure 25: Trends in Profits After Tax



Source: published bank data

Consequently, Return on Assets (ROA) and Return on Equity (ROE) decreased to 2.9 percent and 22.4 percent, in December 2023, from 3.7 percent and 26.3 percent, respectively, in December 2022. The Profits before tax (PBT) for the nine (9) banks in the large peer group that accounted for 84.7 percent of overall PBT declined in 2023, which offset the increase in PBT for banks in the medium and small peer groups 2023, resulting to decline in the aggregate PBT. The decrease in profitability contributed to slow build up in capital through retained earnings of 6.9 percent, to KSh 980.9 billion in December 2023 from KSh 917.6 billion in December 2022 **(Table 4)**.

Table 4: Profitability of the banking sector

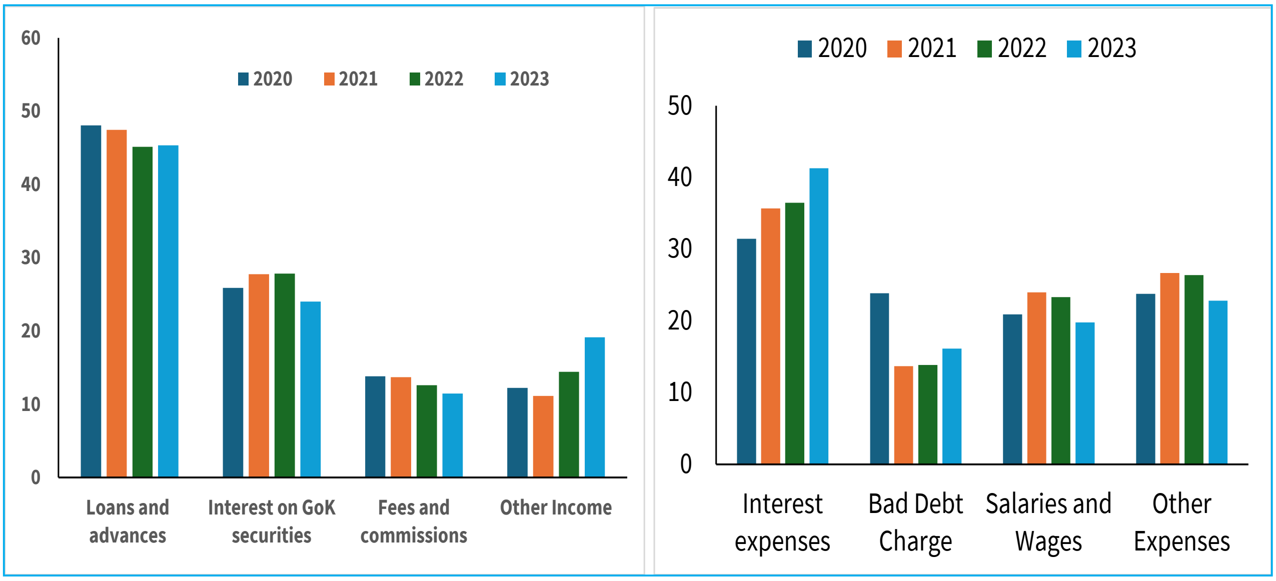
CATEGORY		2019	2020	2021	2022	2023	Percentage Change
All Banks (39)	PBT (KShBln)	159.1	112.1	112.1	240.4	219.3	-99.91
	ROA (%)	2.5	2.1	2.1	3.7	2.9	-0.83
	ROE (%)	21.2	13.9	13.9	26.3	22.4	-3.91
Large Banks(9)	PBT (KShBln)	142.9	97.5	97.5	208.3	185.6	-10.89
	ROA (%)	4.0	2.4	2.4	4.2	3.1	-1.10
	ROE (%)	26.5	16.3	16.3	30.6	25.3	-5.24
Medium Banks (8)	PBT (KShBln)	18.3	17.2	17.2	29.2	29.9	2.58
	ROA (%)	2.3	1.9	1.9	2.8	2.7	2.58
	ROE (%)	14.1	12.2	12.2	19.6	19.0	-0.64
Small Banks (21)	PBT (KShBln)	-2.1	-2.5	-2.5	2.9	3.7	29.10
	ROA (%)	-0.5	-0.5	-0.5	0.5	0.6	0.07
	ROE (%)	-3.4	-3.7	-3.7	3.4	4.2	0.73

**pp refers to percentage points*

Source: CBK

The total expenses relative to the increase in total income **(Figure 26)**. The growth in expenses was also driven by bad debt charge which increased by 53.9 percent between 2022 and 2023. Interest expenses, staff emoluments and bad debt charge accounted for 77.2 percent of total expenses.

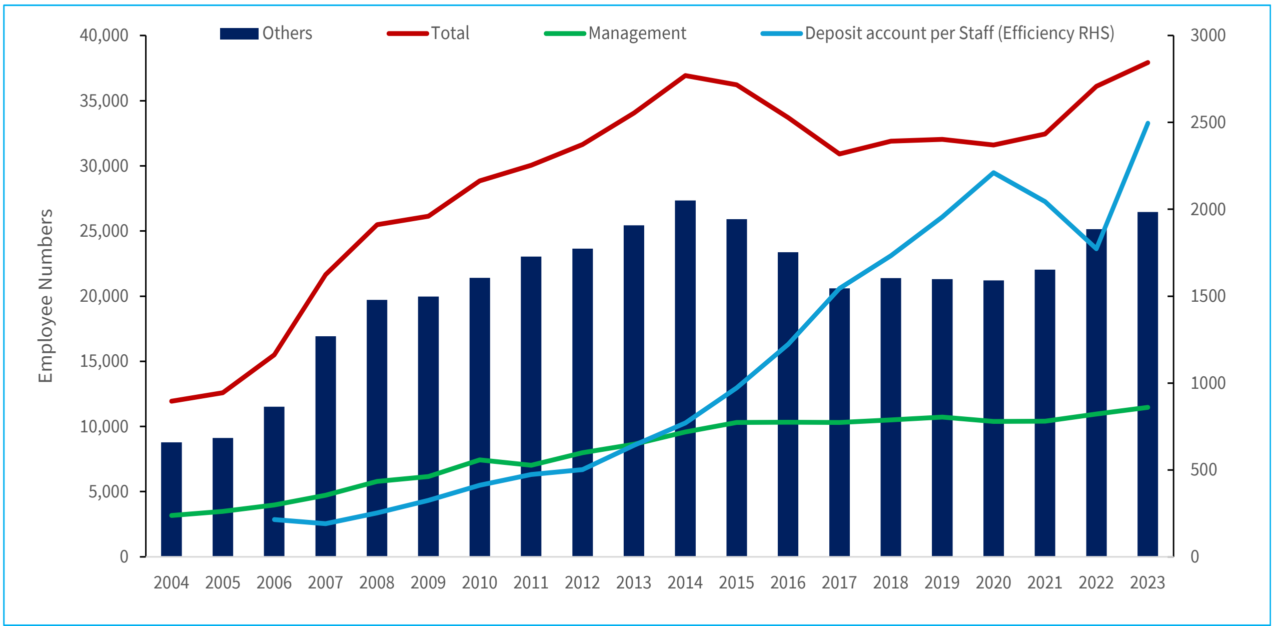
Figure 26: Income Sources and Total Expenses



Source: CBK

The banking sector continued to leverage on technology to enhance efficiency in service delivery and manage operational costs but has come with risks too (Figure 27). As a result, aggregate profit before tax declined in 2023 compared 2022. The decline in profits reduces the sector's ability to set aside sufficient provisions for NPLs and reserves to absorb credit risk and other shocks.

Figure 27: Categories of staff and deposit per staff in the Banking sector



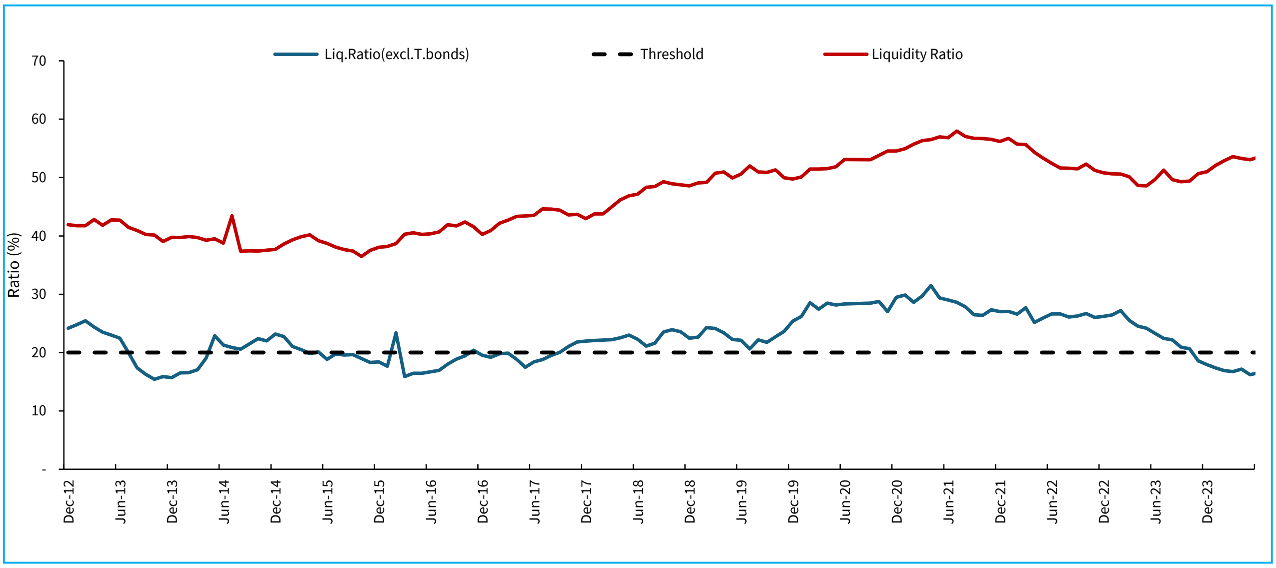
Source: Bank Supervision Annual Report

While technology adoption has come with efficiency gains in the delivery of banking services, it has downside risks to the financial stability. Cyber risk has risen, with cybercriminals becoming increasingly sophisticated, leveraging on a variety of techniques to infiltrate banking systems. Adoption of technology and increased social media usage could also impact negatively selected banks through unfounded rumours, posing a risk of bank runs as was the case with the recent failures of some U.S banks.

An important metric for assessing banking sector soundness and stability is the ability of banks to settle their maturing obligations falling due without difficulties (liquidity ratio) as measured against the 20 percent minimum regulatory requirement. Other measures being used globally, and Kenya is in the process of implementing them are LCR and NSFR. Overall, liquidity ratio for the sector averaged 51.0 percent in December 2023, with banks in the medium peer group having the highest liquidity ratios compared with counterparts in large and small peer groups. Liquid assets[6] grew by 23.4 percent to KSh 2,838.23 billion in December 2023, mainly due to increases in balances with foreign banks because of depreciation. While the overall liquidity ratio remains way above the 20 percent minimum threshold, excluding treasury bonds from liquid assets reduces the buffer significantly. Therefore, any shock or policy change that impacts treasury bonds as liquid assets, could easily introduce liquidity risks **(Figure 28)**.

[6]Liquid assets – notes and coins, balances with central bank of Kenya, balances with domestic commercial bank, balances with banks abroad, balances with financial institutions balances with mortgage finance companies balances with building societies government of Kenya, treasury bills and bonds and foreign treasury bills & bonds

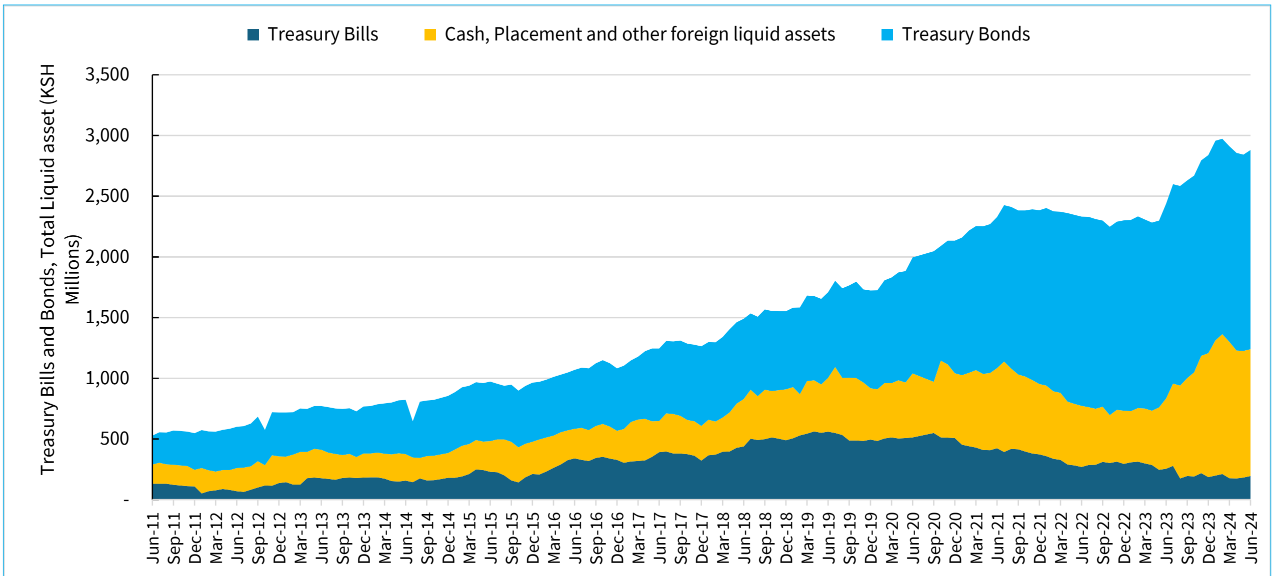
Figure 28: Liquidity Ratios Trends



Source: CBK

The holding of treasury bills declined by 23.2 percent while treasury bonds increased by 2.3 percent in June 2024. However, the share of tradable treasury bonds and bills in liquid asset held by banks declined to 63.8 percent in June 2024, from 76.2 percent in June 2023 and 81.0 percent in December 2022 **(Figure 29)**. This was driven by reduction in investment in Government securities on the secondary and increase in yields. Banks also increased cash, placement and foreign liquid assets to cater for their liquidity needs, especially with increase in domestic interest rate and tightening of liquidity.

Figure 29: Composition of Liquid Assets



Source: CBK

Despite the banking sector having adequate capital and liquidity buffers, emerging risks and the need for banks to finance large projects has created the need to increase their capital base. In this regard, the CBK in collaboration with The National Treasury is reviewing minimum capital requirements. The current minimum core capital was adjusted from KSh 250 million in 2008 to KSh 1 billion in 2012. and the current review is expected to raise this figure. Banks that are not able to raise additional capital, especially with tight financial condition may be forced to merge or be wound up, leaving the niche segments either underserved or excluded in the banking sector.

2.1.2 Microfinance Banks

The microfinance banks (MFBs) performance continued on a less favourable growth trajectory across all indicators in 2023, highlighting the persistent challenges facing them **(Table 5)**.

Table 5: Select Indicators for MFBs

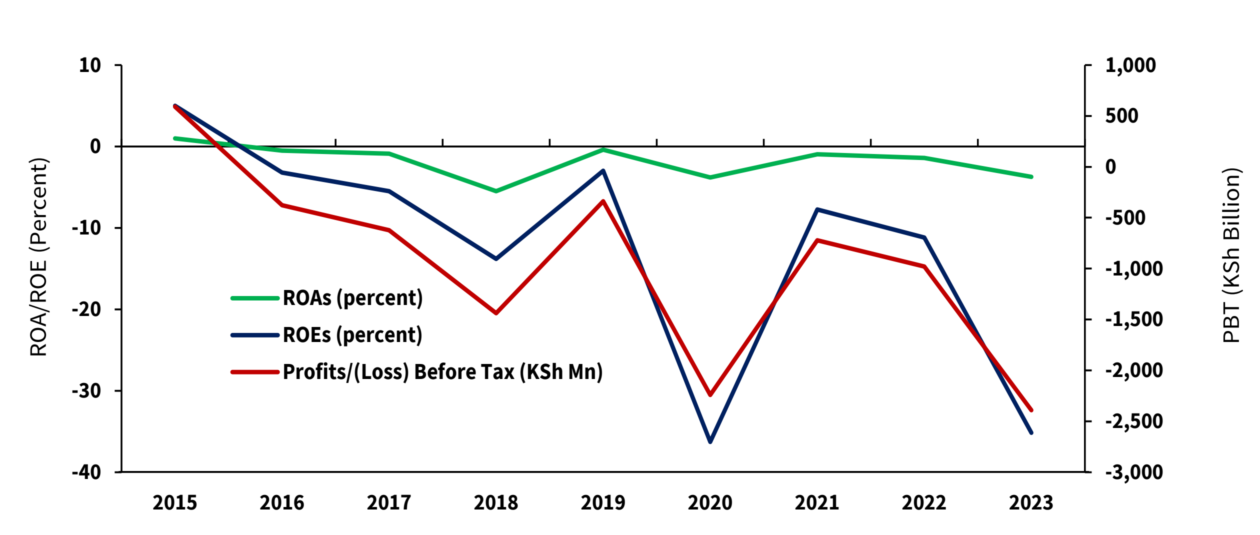
VARIABLE	2015	2016	2017	2018	2019	2020	2021	2022	Annual Change(%)
Total Assets (KSh Mn)	69,465	72,510	67,597	70,754	76,353	74,879	73,964	70,427	-4.78
Net Advances/Loans (KSh Mn)	45,749	47,047	42,847	44,179	46,651	44,179	40,115	39,334	-1.95
Gross NPLs (KSh mn)	4,264	7,288	9,300	9,891	9,817	12,980	12,895	12,502	-3.05
Total Deposits (KSh Mn)	40,589	40,198	38,916	40,961	43,941	49,356	50,413	46,492	-7.78
Borrowings (KSh Mn)	13,220	16,435	13,413	14,607	14,934	11,340	9,082	9,328	2.71
Capital & Shareholders Funds (KSh Mn)	11,633	11,622	11,301	10,443	11,177	8,113	9,235	8,752	-5.23
Profits Before Tax (KSh Mn)	592	-377.0	-622.0	-1437.0	-339.0	-2240.0	(722)	(980)	35.77
ROAs (percent)	1.0	-0.5	-0.9	-5.5	-0.4	-3.8	-0.96	-1.39	-0.43*
ROEs (percent)	5.0	-3.2	-5.5	-13.8	-3.0	-36.3	-7.75	-11.20	-3.45*

Source: CBK
**percentage points*

The subsector has remained weak and vulnerable to shocks and its viability is low. Total assets declined by 8.8 percent, to KSh 64.2 billion in December 2023, mainly on a 4.8 percent decline net loans and advances.

Just like on the assets side, the indicators on the liability side point to a more vulnerable subsector. For instance, the total deposits maintained a downward trajectory, shrinking by 5.7 percent to KSh 43.9 billion in December 2023. The subsector also recorded reduced borrowing from external sources, declining by 1.5 percent during the same year. Tis narrowing funding base has significantly diminished its ability to grow assets, further complicating its recovery path and thus raising stability concerns. The earnings of the subsector deteriorated further, raising viability and soundness concerns. Total Loss Before Tax for all MFBs increased to KSh 2.4 trillion in December 2023 from KSh980 million in December 2022 impacting negatively on ROA and ROE **(Figure 30).**

Figure 30: Profitability for MFBs

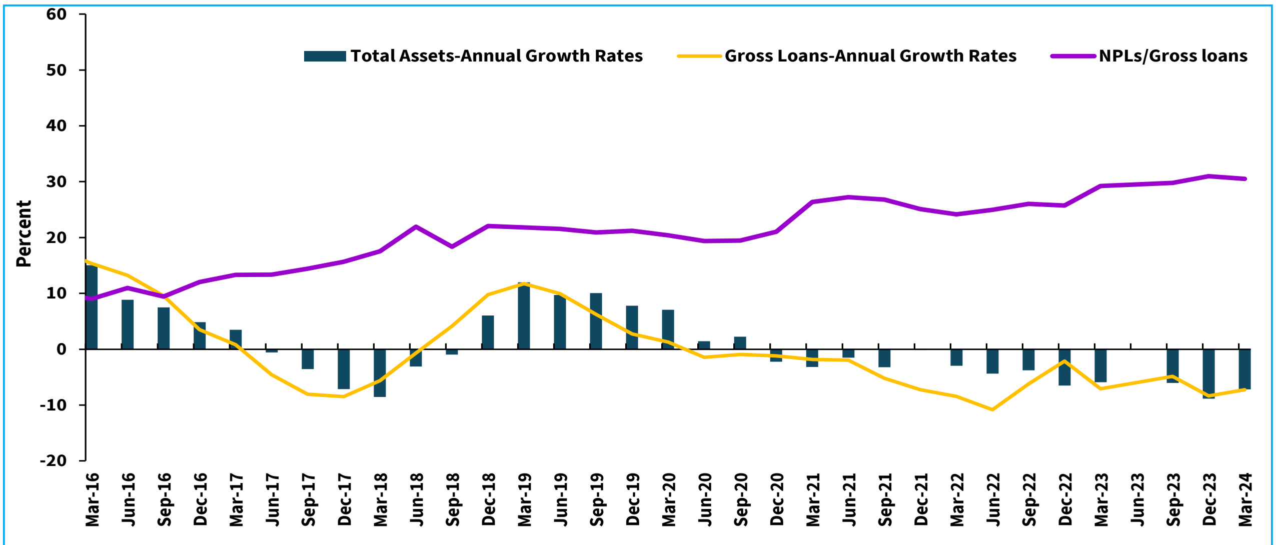


Source: CBK

Of the total 8 MFBs, three of them accounted for 87.5 percent of total losses and only half of the recorded profits in 2023. The continued poor performance of MFBs is mainly attributable to legacy effects of the COVID-19 pandemic, stiff competition from commercial banks and digital credit providers, and inability to adopt technology due high costs involved. Funding challenges that limit the MFBs lending capacity, slow growth in loans and persistent losses continue to undermine the growth and stability of MFBs. The situation has been compounded by expansion of the digital credit providers that pose stiff competition to MFBs since they target low end of the market, which has been considered for long to be their niche market.

Credit risk remain elevated for MFBs despite the 4.9 percent easing gross NPLs, to KSh 11.9 billion in December 2023 (Figure 31). The MFBs Annual growth in gross loans contracted by 8.3 percent in December 2023 compared with 2.5 percent contraction in December 2022. The low uptake of loans/disbursements further complicates the growth potential of the subsector.

Figure 31: Loans Growth Rate for MFBs



Source: CBK

The outlook for MFBs is even more challenging. This is due to tight financial conditions, which will reduce their access to external funding. MFBs relay on loans and deposit to finance their assets. With declining deposit and increase in interest rate, the MFBs face difficulties in accessing loan. In addition, investors evaluate MFBs as risky due to their subdued performance, increase in competition and loss of deposit as being risk borrowers. The financial sector has attracted new entrants such FinTech, telecommunication firms, Government, non-Governmental organisation and development finance institutions in the niche market for MFBs. This has brought competition to MFBs, driving them into loss making territory.

The government policies have encouraged competition, innovation, stability and inclusivity in the financial sector. This is to ensure increased use of financial sector. In addition, regulatory requirement to protect personal data and enhance cyber security, require significant investment. However, MFBs are thinly capitalised to incur such investment.

On the upside, the consumers are increasingly looking for quality and tailor-made services, which can be provided by MFBs. Hence, sophistication among financial services consumers provides an opportunity for MFBs to serve them, thus improving their viability.

2.1.3 Market Conduct and Consumer Protection for Digital Credit

The usage of digital credit has significantly expanded over the years, driven by the increasing integration of information and communication technology in the provision of financial services. The growing ease and convenience of accessing digital financial services, including credit, have fuelled the rise of digital credit as a popular option for many. As a result, numerous firms and households, previously deemed too high-risk by traditional financial institutions and therefore excluded from formal credit markets, now have access to credit through digital platforms.

However, this rapid expansion has also led to a proliferation of unregulated digital credit providers in Kenya, raising among market malpractices, unethical and inconsiderate practices some digital credit providers, These include aggressive debt collection tactics, exorbitant interest rates and violation of data protection laws in obtaining information to inform lending and enforcing loan repayment. Additionally, financial integrity concerns have also emerged, with money laundering and the financing of terrorism linked to unregulated digital credit.

The mounting challenges prompted the enactment of the Central Bank of Kenya (Amendment) Act, 2021, to enable the CBK regulate Digital Credit Providers (DCPs). The Central Bank of Kenya (Amendment) Act, 2021 came into effect on December 23, 2021. The primary aim of this legislation is to empower the Central Bank of Kenya (CBK) to supervise and regulate digital lenders, ensuring that they operate in a fair and transparent manner and to catalyse their growth and development. To further solidify this effort, the Digital Credit Providers Regulations were officially introduced and operationalised on March 18, 2022.

Under these regulations, all previously unregulated digital credit providers were required to apply for a CBK license by September 17, 2022, or cease operations. The regulatory framework not only addresses the urgent concerns around market conduct and consumer protection but also seeks to enhance financial stability in the face of rapid digital expansion. By bringing digital lenders under formal oversight, the CBK aims to create a more stable, ethical, and transparent credit market that can sustainably support Kenya’s evolving financial landscape.

2.1.4. Banking Sector Safety Net

The Kenya Deposit Insurance Corporation (KDIC), an independent State Agency, is mandated by law to implement deposit insurance scheme for customers of member institutions, provide incentives for sound risk management and promptly resolve problem banks in order to proactively mitigate any failure. The KDIC is therefore a 'risk minimizer' that provides a safety net to deposits. This safety assurance fosters public confidence and trust in deposit-taking institutions, thus contributing to overall financial stability goal.

Among the critical indicators to assess the readiness of KDIC to fulfil its mandate well is the level of Deposit Insurance Fund (DIF) or 'Fund'. The DIF grew from KES 179.8 billion in December 2022 to KES 209.2 billion as of December 2023, or 16.4 percent increase. It covers up to KSh 500, 000 per depositor in case of a bank failure, which is consistent with its prudent fund management strategies.

Banks held KSh 5.8 trillion customer deposits as of December 2023. Out of this, deposits insured by the Fund amounted to KSh 857.80 billion, translating to 14.7 percent of fully insured deposits in the event of a bank failure. The effective cover of the deposit[7] increased by 1.8 percent from 23.9percent in 2022 to 24.4 percent in 2023. This is partially explained by increased customers increasing transactions in their bank accounts and maintaining low bank balances. This increased the insured amount relative to deposit liabilities. The deposit cover of 14.7 percent is below the 20 percent regulatory minimum as the best practice by International Association of Deposit Insurance (IADI). However, the 107 million bank accounts in December 2023 accounted for 99 percent of the bank accounts fully covered **(Table 6)**.

Table 6: Select Key Fund Indicators for KDIC

INDICATOR/YEAR ENDING DECEMBER	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Change in percent (2022 - 2023)
Total Deposits (KSh Billion)	2,674.0	2,783.7	3,075.8	3,385.2	3,605.5	4,151.8	4,472.0	4,777.5	5,839.8	22.2
Total Insured (KSh Billion)	244.7	255.5	272.1	269.7	285.1	694.0	715.0	750.6	857.8	14.3
Protection Level (Row2/ Row1) (%)	9.15	9.18	8.85	7.97	7.91	16.72	16.0	15.7	14.7	-4.4
Fund Balance (KSh Million)	61.7	73.3	86.1	100.2	115.1	126.0	154.0	179.8	209.2	16.4
Effective Cover (Row4/ Row2) (%)	25.2	28.66	31.64	37.13	40.35	18.15	21.7	24.0	24.4	1.8
Total no. of accounts (KSh 000)	37.4	43.3	49.9	57.3	64.7	72.7	68.9	67.0	107.0	59.6
Accounts fully covered (KSh Million)	36.1	41.8	48.4	55.9	63.1	72.0	68.2	66.4	106.2	60.0
Protected accounts (Row7/Row6) (%)	96.65	96.72	96.86	97.44	97.56	99.13	99.1	99.1	99.3	0.2
Exposure Level (100% - Row 5) (%)	74.8	71.34	68.36	62.87	59.65	81.85	78.3	76.0	85.3	12.2
Target Fund (%)	2.3	2.6	2.8	3.0	3.2	3.0	3.4	3.8	3.58	-4.9

Source: KDIC

The risk exposure level to the Fund decreased from 76 percent in December 2022, to 75.61 percent in December 2023 with implementation of the risk based premium model. The model rewards member banks for proactively investing in and implementing effective risk management frameworks. KDIC continues to implement appropriate resolution frameworks to ensure that in case of a failure of an institution, the process of resolution is effective and timely in collaboration with CBK and Ministry of National Treasury and Economic Planning.

Box I: Abridged Version of the May 2024 Banking Sector Stress Test

The May 2024 stress test was conducted to assess resilience of the Kenya's banking sector to *credit, interest rate* and *liquidity risks*. The assessment used the December 2023 audited banks data published in March 2024. The credit risk assumes shock increase in Non-Performing Loans (NPLs) while liquidity risk assumes a significant reduction of the balances due to Central Bank and faster implementation of the Single Treasury Account (STA) than anticipated by highly exposed banks, thus reducing deposits for some banks. The interest rate risk assumes repricing risk from marked-to-market losses on government securities held under Available for Sale (AFS) and Held for Trading (HTM) and increase in NPLs in response to rising lending rates.

The stressed scenarios (*moderate* and *severe*) were assessed against the baseline scenario to estimate impact of shocks applied, reflective of macro-financial developments, lending standards, sectoral exposures, and policy changes. The *credit risk* stress test assumed that Non-Performing Loans (NPLs) would increase by 17.2 percent and 28.9 percent under *moderate* and *severe* scenarios against a baseline projection of 10.2 percent by December 2024. The assumptions are realistic given that actual NPLs increased by 29.5 percent in 2023 as compared to 14.3 percent in 2022. The highest growth rate in NPLs was recorded in 2016 at 52.8 percent, with annual NPLs growth rate averaging 32.5 percent for the period 2012 – 2016. The projections used in this stress test are therefore plausible.

The *interest rate* risk stress test was assessed through two transmission channels: (i) raising the Central Bank Policy Rate (CBR) triggers upward revision in lending rates, limiting borrowers from taking up more new loans and at the same time reduces ability of borrowers to service existing loans. This leads to elevated NPLs. The rising NPLs amid slowdown in new lending leads to higher NPLs ratio; and (ii) raising CBR increases interest rates, triggering the repricing of bonds held under AFS and HFT. This in turn leads to mark-to-market valuation losses, negatively impacting earnings and later, capital.

The stress test results indicate that overall, the banking sector has adequate capital and liquidity buffers to mitigate credit, interest rate and liquidity risks while continuing to lend by December 2024 under the baseline scenario. However, seven (7) out of the total thirty-nine (39) banks, are likely not to meet the minimum core CAR of 10.5 percent if both *credit* and *interest rate* risks materialize under *moderate* scenario. A shock of Interest rate risk transmitted through bonds repricing remains the most significant to the banking sector as reflected in amount of capital injection needed to comply with minimum regulatory requirement. Under the liquidity stress test, nine (9) banks would not meet the regulatory liquidity requirements as per the CBK/PG/05 by December 2024 if the risk materializes under *severe* scenario.

The report recommends for enhanced supervisory measures for banks failing the stress tests, including a review of banks' ICAAP arrangements to ensure robust steps towards buildup of sufficient capital buffers to absorb *credit and interest rates* shocks. In addition, gradual shift of banks to the interbank market for liquidity management rather dependence on the central bank support as well as gradual implementation of the Treasury Single Account will allow banks to adjust and source alternative funding, thus mitigating potential liquidity risks. The proposed implementation of Liquidity Coverage Ratio and Net Stable Funding Ratio under the CBK liquidity framework that require banks to hold High-Quality Liquid Assets (HQLA) are critical in mitigating liquidity risk to the banking sector.

A. Background

1. **The May 2024 stress test assessed the impact of credit, interest rate and liquidity risks to the banking sector in 2024 under *moderate* and *severe* scenarios.** The stress test is undertaken annually with an update in the second half of the year to assess resilience of banks to plausible but realistic shock scenarios. The shocks are calibrated from evolving economic conditions, tight lending standards, and policy changes that impact the financial sector. The impact is estimated in terms of the amount of capital shortfall, capital injection and number of banks failing the stress test. The May 2024 stress test used GDP data and the audited aggregate bank data covering the period January – December 2023. The audited bank data was published by 31st March 2024.

B. STRESS TEST

i. Assumptions underpinning stress test scenarios

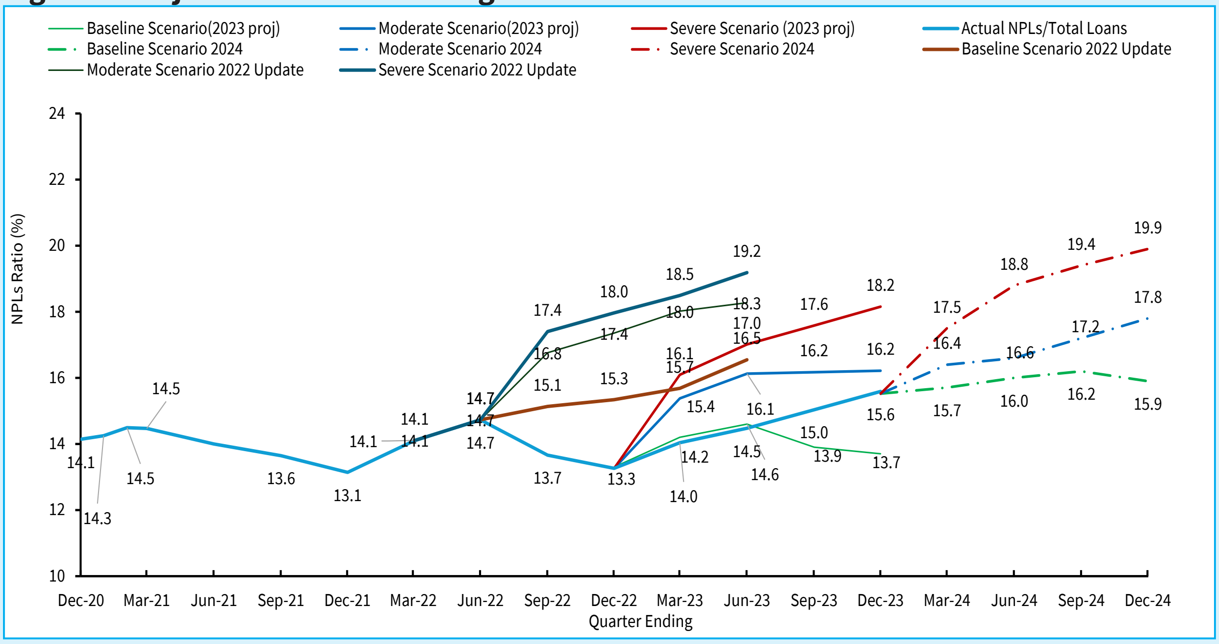
- Economy grows by 5.0 percent in 2024, below the baseline forecast of 5.7 percent on account of legacy problems, persistent inflation pressures that leads to higher-for-longer interest rates, unpredictable weather conditions, narrow fiscal space that limits Government's capacity to support growth and uncertain business environment, partly attributed to varying tax policies.
- Monetary policy rate (CBR) tightening by 1 ppt further raises average bank lending rate by 0.50 ppt and average yields on government bonds by 0.7 ppts by December 2024, with 1.5 standard deviations, respectively.
- Slowdown in lending due to elevated interest rates and increase in credit risk.
- Implementation of Treasury Single Account and reduction of CBK's balances due to commercial banks to 10-year average by December 2024, that significantly reduces liquidity for some banks.

2. If the assumptions hold, gross loans are projected at **KSh 4,213.4 billion** under *severe scenario* against the projected baseline growth of KSh 4,417.0 billion in December 2024, The actual loans stock was **KSh 4,183.5 billion** in December 2023 and KSh 4,033.7 billion in June 2024. Key sectors projected to drive growth in gross loans under alternative scenarios are manufacturing, transport & communication, and trade. These sectors are more exposed to fiscal consolidation, taxation and reduced household and corporate demand due to decline disposable income. Slowest growth in lending is projected in building & construction, and real estate sectors.

3. Gross NPLs are projected at KSh 840.3 billion under *severe* scenario against a *baseline* projection of KSh 718.4 billion in December 2024. The actual gross NPLs was KSh 651.8 billion in December 2023 and KSh 657.6 billion in June 2024. The sectors projected to drive NPLs under severe scenario are Trade, Real Estate, Transport & Communications and Manufacturing.

4. Given the underlying domestic and internationa risks to the economy, the NPLs are projected to grow by 10.2 percent in the *baseline*, 17.2 percent in the *moderate* and 28.9 percent under *severe* scenarios by December 2024 relative to December 2023. As a result, the NPLs to Gross loans ratio is estimated at 15.9 percent in the baseline, 17.8 percent under *moderate* and 19.9 percent under *severe* scenarios by December 2024 if the assumptions materialize. With the actual NPLs ratio at 16.3 percent in May 2024, it means the is in the *moderate* scenario of credit risk **(Figure i)**.

Figure i: Projected Non-Performing Loans Ratio



Source: Staff Computations

5. The forecast errors between the actual and projected gross loans, NPLs and NPLs ratio indicates relatively better degree of accuracy. The forecasted NPLs ratio was above the actual by an average of 0.22 percentage points in 2023 while the actual NPLs grew faster than projected by an average of KSh 18.77 billion in 2023.

Figure ii: Regional estimates of climate adaption needs, 2020-30

Dec-22			Mar-23			Dec-23			Mar-24		
Actual Growth	Fore-cast Value	Deviation from Forecast	Actual Growth	Forecast Value	Deviation from Forecast	Actual Growth	Forecast Value	Deviation from Forecast	Actual Growth	Fore-cast Value	Deviation from Forecast
3,630.25	3,587.23	43.02	3,852.28	3,790.06	62.22	4,183.45	4,119.31	64.14	4,083.55	4,172.06	(88.51)
503.24	481.58	21.66	540.78	538.93	1.85	651.81	616.12	35.69	641.25	652.86	(11.61)
13.86	13.42	0.44	14.04	14.22	-0.18	15.58	14.96	0.62	15.70	15.65	0.05

ii. Preliminary Analysis

6. **The stress test was conducted on banks that were fully compliant with the regulatory capital requirements before applying any shock**. As a result, five (5) banks, with core capital to total risk weighted assets ratio (core CAR) below the minimum 10.5 percent, were excluded. These banks require a total of KSh 9.59 billion in additional capital to meet regulatory capital

requirement even before any shock is applied. However, one is under acquisition, hence the number reduces to four (4) banks and additional capital required reduces to KSh 6.3 billion. The remaining thirty-four (34) banks were adjusted for full provisioning to assess capital adequacy. The post-provisioning core capital adequacy ratio (Core CAR) of six (6) banks fell below regulatory minimum of 10.5 percent and require additional KSh 5.9 billion in capital to meet the minimum core CAR. The number of banks not having sufficient provisioning levels increased from four (4) in 2022 to six (6) in 2023, partly explained by reduced profits after tax (PAT) in 2023 as compared to 2022. This constrained their capacity to build-up more capital buffers through retained earnings.

iii. Credit Risk stress test results

(a) Baseline/Uniform stress test: Applies Shocks Calibrated from Historical NPLs that reflect economic, policy and lending conditions from May 2023 stress test

7. The May 2024 Baseline (Uniform) stress test used shocks applied in the May 2023 stress test on the December 2023 data to assess the resilience of the banking sector in 2024. This helps us to assess whether banks built additional capital buffers and implemented required measures to deal with shocks that existed in May 2023, and likely to persist in 2024. The 2024 Baseline stress test assumes that NPLs increase by 15.6 percent, 22.95 percent, and 38.97 percent under the *baseline, moderate* and *severe* scenarios. As a result, NPLs would increase to KSh 753.50 billion, KSh 801.40 billion and KSh 905.8 billion under the *baseline, moderate* and *severe* scenarios, respectively, by December 2024. The are results summarized in Figure **iii**.

Overall, banks hold adequate capital to withstand a severe shock and continue lending by December 2024. Under the severe scenario, a 38.97 percent shock increase in overall NPLs would reduce core CAR from 14.1 percent in pre-shock to 13.0 percent, which is still above the minimum core CAR of 10.5 percent. A total of nine (9) banks will not meet the minimum regulatory capital threshold if this shock materializes. Consequently, a total of KSh 18.8 billion in additional capital is needed for these banks to fully comply with regulatory requirement by December 2024 if the severe scenario materializes. Of these banks, **two (2)** are in tier I, **two (2)** banks are in *medium* peer group and **five (5)** banks are in *small* peer group. Compared to the May 2023 stress test, results of the May 2024 stress test reveal reduced capital buffers as indicated by post-shock core CARs, number of banks that failed the stress test and amount of additional capital needed. The result is also consistent with an increase in the number of banks that failed to meet the core CAR after adjusting for full provisioning in line with CBK/PG/04. Sectoral concentration is minimal; hence capital is less impacted by sectoral shock.

Figure iii: Baseline Stress Test Results Based on December 2023 Data

Transmission Channel	Impact on Minimum Core CAR due to Increase in NPLs	May 2023 Stress Test Based on December 2022 Data			May 2024 Stress Test Based on December 2023 Data		
		Baseline Scenario	Moderate Scenario	Severe Scenario	Baseline Scenario	Moderate Scenario	Severe Scenario
Size of the Shock Appiled Under Each Scenario		15.60	22.90	38.97	15.60	22.90	38.97
1. A Shock Increase in Overall NPLs	Pre-shock Core Capital Ratio (%)	15.92	15.92	15.92	15.75	15.75	15.75
	Post-shock Core Capital Ratio (%)	15.64	15.49	15.07	13.68	13.47	13.01
	Number of Banks below minimum Core CAR	6	6	8	7	8	9
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	8,693.62	9,147.37	11,919.37	5,767.24	9,170.44	18,815.97
2. A Shock Increase in Sectoral NPLs	Pre-shock Core Capital Ratio (%)	15.92	15.92	15.92	15.75	15.75	15.75
	Post-shock Core Capital Ratio (%)	15.69	15.58	15.37	13.79	13.44	13.18
	Number of Banks falling minimum Core CAR	6	7	9	7	8	9
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	9,810.08	10.752.77	14,004.24	5,787.34	12,956.81	17,980.79

Source: CBK Staff Computations

(b) Event-based Stress Test 1: Based on Economic, Financial and Policy Environment

8. **Challenging business environment, tight financial conditions, monetary and fiscal policies tightening, negatively impacted firms and households' incomes, thus reducing their ability to service existing loans and/or take up new loans,** contributing to faster growth in NPLs. These shocks can be transmitted through increase in Overall NPLs; increase in sectoral NPLs; and default by top borrowers per bank (1, 2 and 3 top borrowers per bank default under the baseline, moderate and severe scenarios, respectively. Under severe scenario, a 28.9 percent shock increase in overall NPLs would result in 7 banks requiring a total of KSh 27.6 billion in capital injection to fully comply with regulatory capital minimum of 10.5 percent by December 2024. The core CAR would decline to 13.67 percent in post-shock severe scenario from the pre-shock core CAR of 15.75 percent. The most significant shock is a default by top three borrowers per bank under severe scenario by December 2024. If such a shock materializes, the sector will require KSh 239 billion to meet the regulatory capital requirement by December 2024, signifying higher concentration risk/single borrower exposure in 2023 **(Figure iv)**.

Overall, the sector was more vulnerable to credit risks transmitted through shock increase in overall NPLs, sectoral NPLs and default of top 3 borrowers per bank in 2023 (May 2024 Stress test) as compared to 2022 (May 2023 stress test), reflecting the elevated credit risk. We note that while the number of banks under this stress test declined compared to the number in the the May 2023 stress test, the amount of capital required to comply with regulatory capital requirement across all the scenarios has increased significantly.

Under the single borrower/top borrower default per bank, the number of banks failing the stress test under *severe* scenario has increased in the May 2024 stress test compared to the May 2023 stress test. However, the amount of capital required to fully comply with regulatory core CAR of 10.5 percent more than doubles to KSh 239 billion from KSh 109 billion in the May 2023 stress test. This signifies increased concentration risk, implying banks in tier I have become more exposed to a few large borrowers. If the single borrower severe scenario materializes, eight (8) banks in large peer group, four (4) banks in *medium* peer group and eight (8) banks in *small* peer group will fail the stress test by December 2024. The eight (8) tier I banks account for 89.4 percent of total capital shortfall.

Figure iv: Shock Increase in NPLs due to Unfavourable Macro financial Conditions

Transmission Channel	Impact on Minimum Core CAR due to Increase in NPLs	May 2023 Stress Test Based on December 2022 Data			May 2024 Stress Test Based on December 2023 Data		
		Baseline Scenario	Moderate Scenario	Severe Scenario	Baseline Scenario	Moderate Scenario	Severe Scenario
Size of the Shock Appiled Under Each Scenario		16.46	22.95	38.97	10.21	17.15	28.91
1. A Shock Increase in Overall NPLs	Pre-shock Core Capital Ratio (%)	15.92	15.92	15.92	15.75	15.75	15.75
	Post-shock Core Capital Ratio (%)	15.38	15.16	14.62	14.23	14.02	13.67
	Number of Banks below minimum Core CAR	8	9	10	6	6	7
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	9,489.59	14,429.11	26,236.88	17,953.18	21,466.67	27,600.24
2. A Shock Increase in Sectoral NPLs	Pre-shock Core Capital Ratio (%)	15.92	15.92	15.92	15.75	15.75	15.75
	Post-shock Core Capital Ratio (%)	15.64	15.19	15.01	14.29	14.10	13.76
	Number of Banks falling minimum Core CAR	9	10	10	6	6	8
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	11,039.23	19,577.44	24,398.65	17,571.93	20,372.10	26,185.76
3. A Shock Default by Large borrowers per bank	Number of large borrowers that default	One (1)	Two (2)	Three (3)	One (1)	Two (2)	Three (3)
	Pre-shock Core Capital Ratio (%)	15.92	15.92	15.92	15.75	15.75	15.75
	Post-shock Core Capital Ratio (%)	13.6	11.8	10.2	11.44	9.23	7.27
	Number of Banks below minimum Core CAR	15	15	19	15	18	20
	Capital required (KSh Mn) by banks to meet the minimum Core CAR of 10.5%	26,200.12	62,778.59	109,405.73	78,152.70	160,903.95	238,998.57

Source: CBK Staff Computations

iv. Interest Rates Stress Test

9. **Interest rate risk stress test was conducted using two transmission channels: shock increase in NPLs due to increased lending rate and revaluation losses from bonds repricing on account of increase in Central Bank Policy Rate.** A total of 34 banks were included in this

stress test, thus excluding Islamic compliant banks. Assuming a 1ppt increase CBR, from current level to 14 percent, would;

a. Raise average lending rate by 0.5 ppt and 0.75 ppt, and 0.17 ppt, with 1.03 standard deviations in the 3rd, 4th and 5th months, respectively. Cumulatively, a 1 ppt increase in CBR leads to 2.45 ppts increase in average lending rate by the 7th month. Thus, a 1 ppt increase in CBR is projected to raise the weighted average lending rate from 14.63 percent in December 2023 to about 17.08 percent in December 2024 under the baseline scenario. An increase in CBR by 2ppts under *moderate* and 3ppts under *severe* scenarios, would increase weighted average lending rate by 3.49 ppts and 6.61 ppts, respectively by December 2024. This brings the estimated weighted average lending rate to about 18.12 percent and 21.24 percent under the *moderate* and *severe* scenarios by December 2024 **(Figure v).**

b. An increase in the weighted average lending rate by 1 ppt following increase in CBR leads to 1.0 ppt, 1.1 ppts and 1.2 ppts increase in NPLs in the 6th, 7th and 8th month, respectively. Cumulatively, NPLs is projected to rise by 3.30 ppts, 3.61 ppts and 4.57 ppts from baseline growth of 12.38 percent to 15.68 percent, 15.99 percent, and 16.95 percent, under *baseline, moderate* and *severe* scenarios.

Figure v: Stress test Results for Interest rate Risk

CAPITAL	LARGE BANKS (9)	MEDIUM BANKS (8)	SMALL BANKS (21)	TOTAL
Pre-Shock Capital Per Peer Group (KSh '000s)	680,485,595.40	151,231,406.11	60,855,292.41	892,572,293.91
Pre-Shock Core CAR for all banks (%)	14.55	21.01	15.47	15.41
Pre-Shock Capital for banks in the ST (KSh '000s)	680,485,595.40	140,965,999.25	61,260,873.59	882,712,468.24
Pre-Shock Core CAR for banks in the ST (%)	14.55	24.68	17.17	15.75
1. Impact of increase in CBR on NPLs				
Moderate: Impact of increase in CBR by 2 percentage points on NPLs				
Increase in NPLs	17,793,430.30	1,815,088.29	2,375,094.16	21,983,612.75
Core CAR (percent)	14.26	24.44	15.69	15.39
No. of Banks failing ST	0	0	1	1
Change CAR Post-Shock (ppts)	-0.29	-0.24	-1.49	-0.36
Capital needed to meet 10.5% (KSh '000s)	0	0	2,630,906.22	2,630,906.22
Severe Scenario: Impact of Increase in CBR by 3 percentage points on NPLs				
Increase in NPLs	22,531,070.59	2,298,369.77	3,007,481.60	27,836,921.95
Core CAR (percent)	14.18	24.38	15.56	15.31
No. of banks failing ST	0	0	1	1
Change CAR Post-Shock (ppts)	-0.36	-0.30	-1.61	-0.43
Capital needed to meet 10.5% (KSh '000s)	0	0	2,704,100.07	2,704,100.07

CAPITAL	LARGE BANKS (9)	MEDIUM BANKS (8)	SMALL BANKS (21)	TOTAL
2. Impact of Increase in CBR on Bonds Repricing				
Moderate Scenario: Impact of Increase in CBR by 2 percentage points				
Mark-to-market losses	99,544,412.63	30,865,131.27	5,485,454.56	135,894,998.46
Core CAR (percent)	12.42	19.27	15.15	13.30
No. of banks failing ST	2	2	3	7
Change CAR Post-Shock (ppts)	-2.13	-5.40	-2.03	-2.45
Capital needed to meet 10.5% (KSh'000s)	37,898,399.99	4,897,251.78	1,749,762.96	44,545,414.73
Severe Scenario Impact of Increase in CBR by 3 percentage points				
Mark-to-market losses	151,288,759.54	47,246,057.07	8,096,479.70	206,415,704.40
Core CAR (percent)	11.31	16.44	14.46	12.04
No. of banks failing ST	2	3	3	8
Change in CAR post-Shock (ppts)	-3.23	-8.23	-2.72	-3.70
Capital needed to meet 10.5% (KSh '000s)	68,728,388.78	10,500,485.71	3,169,025.86	82,397,900.35

c. If NPLs increase by 4.57 percentage points under severe scenario, one bank would fail the stress test, but would just need KSh 2.7 billion to meet the minimum regulatory capital of 10.5 percent. In addition, the core CAR declines by 0.34 percentage point from the pre-shock capital of 15.75 percent. Under the severe scenario, where overall NPLs ratio increase to 16.95 percent from the baseline in response to rising interest rates, the total capital required for banks to meet the regulatory requirement is KSh 2.7 billion. The core CAR declines by 0.43 ppt and (1) one bank the stress test **(Figure 21)**.

10. **The interest rates risk transmitted through bonds repricing due to increase in policy rate (CBR) is estimated as follows:**

a. Using VAR model, it is estimated that a 1 ppt increase in CBR leads to 0.75 ppt increase in average bond yields with 1.13 standard deviations in the moderate scenario and 2.41 standard deviation. This implies that average yields are projected to increase by 2.63ppts and 4.66 ppts under the *moderate* and *severe* scenarios from an average of 16.23 percent in December 2023, when CBR increases 2 and 3 ppts. Thus, average yields are projected to increase to 18.86 percent and 20.89 percent, under *moderate* and *severe* scenarios, respectively, if CBR increase by 2 ppts and 3 ppts from the current level of 13 percent. Bonds repricing under Available For Sale (AFS) and/or Held For Trading (HFT) portfolios leads to revaluation losses that are charged to the bank's profits with passthrough to the bank capital. All bonds used in the stress test assumed a uniform settlement date of January 30, 2024.

b. Under *severe* scenario of 3ppts increase in CBR, overall core CAR of banks in the stress test would decline from pre-shock level of 15.75 percent to 12.0 percent in December 2024 following bonds repricing. Most affected banks in large peer group, with least core CAR of 11.31 percent. A total of eight (8) banks would fail the stress test and require capital injection of KSh 82.4 billion to meet the minimum core CAR of 10.5 percent. Of this amount, KSh 52.6 billion is attributed to the one tier I bank. The remainder is distributed between 2 tier II banks and 3 tier III banks.

c. The combined (Combo) shock assumes an increase in NPLs and revaluation losses from bonds repricing triggered by increase in CBR. It assumes that NPLs increase by 15.68 percent, 15.99 percent, and 16.95 percent, while average yields on bonds increase to 16.22 percent, 18.86 percent and 20.56 percent, under *baseline, moderate* and *severe* scenarios, respectively **(Figure vi)**.

d. Under a *moderate* scenario whereby CBR increases by 2 ppts and NPLs ratio increase to 16.22 percent core, the CAR of banks in the stress test would decline from pre-shock level of 15.75 percent to 13.0 percent in December 2024. A total of seven (7) banks would fail the stress test and would require additional capital injection of KSh 51.0 billion to meet the minimum regulatory capital requirement of 10.5 percent. More than half of this amount (KSh 43.1 billion) is attributed to the two banks in large peer group, two in medium peer group and three (3) in small peer group fail the stress test.

Figure vi: Stress test Results of combined shock increase in NPLs and revaluation losses

CAPITAL	LARGE BANKS (9)	MEDIUM BANKS (8)	SMALL BANKS (21)	TOTAL
Pre-Shock Capital Per Peer Group (KSh '000s)	680,485,595.40	151,231,406.11	60,855,292.41	892,572,293.91
Pre-Shock Core CAR for all banks (%)	14.55	21.01	15.47	15.41
Pre-Shock Capital for banks in the ST (KSh '000s)	680,485,595.40	140,965,999.25	61,260,873.59	882,712,468.24
Pre-Shock Core CAR for banks in the ST (%)	14.55	24.68	17.17	15.75
Moderate Scenario: Increase in CBR by 2 percentage points on NPLs, Bonds Repricing				
Mark-to-market and Credit losses	112,889,485.36	32,226,447.49	7,266,775.18	152,382,708.02
Core CAR (percent)	12.13	19.04	14.68	13.00
No. of banks failing ST	2	2	3	7
Change CAR Post-Shock (ppts)	-2.41	-5.64	-2.50	-2.74
Capital needed to meet 10.5% (KSh'000s)	43,111,359.10	5,676,134.59	2,232,773.35	51,020,267.04
Severe Scenario: Increase in CBR by 3 percentage points on NPLs, Bonds Repricing				
Mark-to-market and Credit losses	168,187,062.48	48,754,242.48	10,352,090.90	227,293,395.86
Core CAR (percent)	10.95	16.14	13.86	11.67
No. of banks failing ST	3	3	4	10
Change in CAR post-Shock (ppts)	-3.60	-8.53	-3.31	-4.07
Capital needed to meet 10.5% (KSh '000s)	75,744,559.73	11,700,543.76	3,840,174.37	91,285,277.86

e. Under *severe* scenario whereby CBR increases by 3 ppts and NPLs ratio would increase to 18.86 percent core CAR of banks in the stress test would decline from pre-shock level of 15.75 percent to 10.95 percent in December 2024. A total of ten (10) banks would fail the stress test and would require additional capital injection of KSh 91.3 billion to meet the minimum regulatory capital requirement of 10.5 percent. Three banks in the large peer and medium group will require KSh 75.8 billion and KSh 11.7 billion, while four (4) banks in small peer group will require KSh 3.8 billion in additional capital to meet minimum Core CAR of 10.5 percent.

v. Liquidity Risk Stress Test

11. **The liquidity stress test was conducted to assess the resilience of the banking sector to faster than expected implementation of the Treasury Single Treasury Account and significant reduction of Balances due to Central Bank to the 10-year average to 2023.** Reduction in Central Bank advances to banks reduces the stock from KSh 198.8 billion in 2023 to the 10-year average of KSh 41.15 billion. Prior to this new level, this figure averaged KSh 18 billion in 8-years to December 2021, before rising to KSh 78 billion in 2022 and 198.8 billion in 2023. The amount includes reverse repurchase agreements (reverse repos) operations, mainly used for short-term liquidity management in open market operations. The stress test employed three scenarios:

(a) Baseline Scenario: Central Bank liquidity support reverts to the 10-year average of KSh 41.15 billion to enable banks manage liquidity through interbank without CBK support. This ensures separation of liquidity support for monetary policy from liquidity support for financial stability objective. Deposits from government and government-related institutions remain unchanged.

(b) Moderate Scenario: Assumes withdrawal of deposits from government and related institutions due to implementation of the Single Treasury Account. However, balances due to Central Bank are maintained at the level recorded in 2023 to complement the customer deposits, borrowed funds from other financial institutions except CBK, and government securities.

(c) Severe Scenario: Assumes complete withdrawal of balances due to Central Bank and immediate implementation of Single Treasury Account by December 2024. This would leave, government securities, customer deposits and borrowed as the main sources of liquidity.

Under the *baseline* scenario, the liquidity ratio of 4 banks falls below the regulatory requirement of 20 percent and requires KSh 22.8 billion in liquid assets to fully comply. If the *moderate* scenario materializes, six (6) banks would require KSh 45.9 billion in high quality liquid assets to comply with the prudential guideline on liquidity requirement.

Lastly, assuming simultaneous implementation of Single Treasury Account and significant reduction in the CBK's liquidity support under *severe* scenario, would see the overall liquidity ratio decline from 51.0 percent in December 2023 to 39.8 percent in December 2024. As result, nine (9) banks will require KSh 68.0 billion in high quality liquid assets for them to comply with regulatory requirement on liquidity. Overall, the sector liquidity ratio remains well above the regulatory requirement of 20 percent standing at 39.8 percent in the ***severe scenario*** **(Figure vii)**.

Figure vii: Stress test Results for Liquidity Risk

	Actual Liquidity	Baseline	Moderate Scenario	Severe Scenario
Bank A	17.7	16	17.3	9.2
Bank B	13.8	7.8	2.7	-26.4
Bank C	17.5	14.4	13.3	-1.8
Bank D	20.8	12.4	9.5	-30.9
Bank E	38.4	29.1	37.6	-7.1
Bank F	41.8	40	-1.7	-10.4
Bank G	31.8	25.2	27.8	-4.2
Bank H	22	20	22	12.2
Bank I	23.9	23.1	-11.5	-14.9
Total	51.0	50.3	43.3	39.8

D. SUMMARY OF STRESS TEST RESULTS

1. Banking sector has sufficient capital to absorb credit, interest rate and liquidity risks under *baseline* scenario in 2024.
2. Credit risk is elevated under *moderate shock scenario* of macro-financial conditions in 2024.
3. Concentration Risk has increased as reflected by the number of banks and amount of capital needed if top 3 borrowers per bank default under *severe* scenario.
4. Interest rate shock leading to higher NPLs and valuation losses on bond repricing reduces Core CAR from 15.75 percent to 11.67 percent under *severe* scenario in December 2024.
5. Liquidity risk emerges under *severe* scenario if CBK significantly reduces its reverse repos stock to banks and TNT implements the TSA faster than expected.

E. RECOMMENDATIONS

1. Banks need to refocus their Internal Capital Adequacy Assessment Process (ICAAP) to prioritize build-up of stronger capital buffers in the face of current and potential risks.
2. Closer monitoring of performance of top borrowers per bank is critical given the increased concentration risk. This should include analysis of banks' business models and business models of their top borrowers.
3. A combination of implementing the Basel III liquidity standards (LCR and NSFR), the need for banks to hold High-Quality Liquid Assets (HQLA) and enhanced measurement of liquidity is recommended to forestall the potential liquidity risk.
4. Most affected banks are encouraged to diversify their funding sources and reduce dependence on CBK liquidity support and deposits from MDAs.
5. The recommended Treasury Single Account model be implemented gradually to enable banks adjust to changes in deposits related to MDAs and thus limit liquidity shock of exposed banks.

2.1.4. Risks Assessment and Outlook for the Banking Sector

The banking sector remained stable and resilient in 2023 and first half of 2024, on the backdrop of high inflation, moderation in economic growth, high interest rates due to monetary policy tightening and fiscal consolidation. The sector has adequate capital and liquidity buffers and remains profitable. However, the sector faces downside risks in 2024 and 2025 arising from domestic and global macroeconomic and policy developments as well as institutional challenges that require closer monitoring for timely and effective policy interventions. Among the downside risks discussed in this report are credit, interest rates, liquidity risks and climate change related risks transmitted through drought and floods. The banking sector is also exposed to operational risks associated with rapid adoption of financial technologies in the delivery of financial services and products.

Credit risk remains elevated as reflected by high non-performing loans and slow growth in lending. This is projected to persist in the remainder of 2024 and better part of 2025 on account of higher for longer interest rates environment reflecting overall tight monetary policy tightening to address legacy inflationary pressures. The sector is also faced with challenging business environment by households and firms. This has been partially attributed to high inflation, high taxation and other levies, and delays by government to pay suppliers of goods and services as fiscal consolidation continues to be implemented.

The higher for longer Interest rates environment continues to pose interest rate risk reflected in persistently high NPLs and slow growth in lending as well as repricing risk for interest rate sensitive assets. This has elevated the NPLs ratio in 2023 and is expected to remain high in 2024 and first half of 2025. The banks which had invested in the long-term bonds at low coupon rates especially during and shortly after the COVID-19 pandemic period, due to due to safety and valuation preservation, faced additional risk of bonds repricing of those categorized as Available for Sale or Held for Trading, normally subject to mark-to-market valuation. Banks faced with liquidity pressures are either prompted to use these bonds to secure liquidity from interbank market or from central bank through reverse repos. However, those banks which sell these bonds eventually book actual losses in their books, impacting negatively on profitability and capital build-up.

Liquidity risk remains low but may increase with envisaged reforms in the public finance management, interbank market and monetary policy operations. While liquidity ratios have remained well above the minimum regulatory requirement of 20 percent. However, the proposed improvement in the measurement of liquidity through incorporation of Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) into the CBK's current liquidity framework as envisaged under the Internal Liquidity Adequacy Assessment Process (ILAAP), may drive some banks to experience elevated liquidity risks. In addition, the proposed implementation of the Treasury Single Account, could impact negatively for some banks that hold large amounts of government-related deposits if this is done abruptly. Lastly, banks have build-up significant stocks of reverse repos since 2022 and any reversal to pre-2022 levels could pose liquidity challenges to highly exposed banks.

Climate change shocks are posing risks to Kenya's financial sector stability. The main risks arising from Climate change shocks to Kenya are physical risks as reflected by damage caused by floods in 2023 and frequent drought events impacting growth and inflation. Sectors such as agriculture, transport, tourism and energy, which accounted for 18.8 percent of gross loans and 17.4 percent gross NPLs in December 2023, have in the past borne the brunt of extreme weather events, highlighting the overall direct impact on the financial sector. While the transition and liability risks are less prominent for now, banks with exposure to high carbon emission sectors are likely to face transition risk with compliance to new standards for climate change. In the outlook, the, the government and financial sector players have initiated measures to address this risk while at the same time tap into its emerging opportunities.

Operational and governance risks expected to rise as banks become more interconnected with sectoral and cross–border operations coupled with rapid technological innovations. Expansion of Kenyan banks in the East African region not only comes with country risk, but it also introduces governance issues if not well managed. This combined with expansion into other sectors such as insurance, capital markets and even non-financial related sectors, comes with institutional complexities that can be a source of risks. Risks transmission through this channel has not materialised in the past but requires closer monitoring of interconnectedness.

Perhaps the most significant and emerging operational risk facing the financial sector is associated with the rapid adoption of financial technologies to power the delivery of financial products and services. The incidences of frauds, data privacy concerns, cyber-attacks, and cybersecurity threats increased in 2022. The authorities are alive to these risks and are therefore taking more prudent and stringent remedial controls and risk management measures to address them. Among the major policy developments to address this risk to financial stability was the publications of the Digital Credit Providers regulations following amendments to the Central Bank of Kenya (Amendment) Act No 10 of 2021, and that became effective on December 23, 2021, thus mandating the CBK to bring the previously unregulated digital lenders under its regulatory armpit. CBK have received over 400 DCP applications, 32 have been licensed while others are in various stages of the licensing process.

2.2 Insurance Sector

Insurance sector plays a pivotal role in fostering overall financial stability through underwriting of risks, investment, debt issuance and capital markets development. Across many jurisdictions, insurance companies hold a sizeable portion of their investments in securities issued by other financial institutions, predominantly debt instruments, and equity securities. The role of insurance sector in the property market is also critical, as a buyer, a developer and underwriter of risks. The ability and willingness of insurers to make such investments provides an important contribution to the financial soundness of banks and more broadly to financial stability. Insurers also allocate capital to the real economy by purchasing debt securities and equity stakes of non-financial firms or through real estate investments. These activities underscore the importance of a financially sound and stable insurance sector.

Like in many jurisdictions, Kenya's insurance sector is classified into two broad categories: general insurance business and long-term insurance business. It comprised of 56 insurance companies, 1 micro insurance company, 5 reinsurance companies, 220 insurance brokers, 23 bancassurance intermediaries and 14,036 insurance agents. The sector recorded a 16.5 percent growth in premiums to close the year at KSh 359.86 billion. The general insurance business accounted for the largest share of total premiums at 52.9 percent in 2023**(Table 7)**.

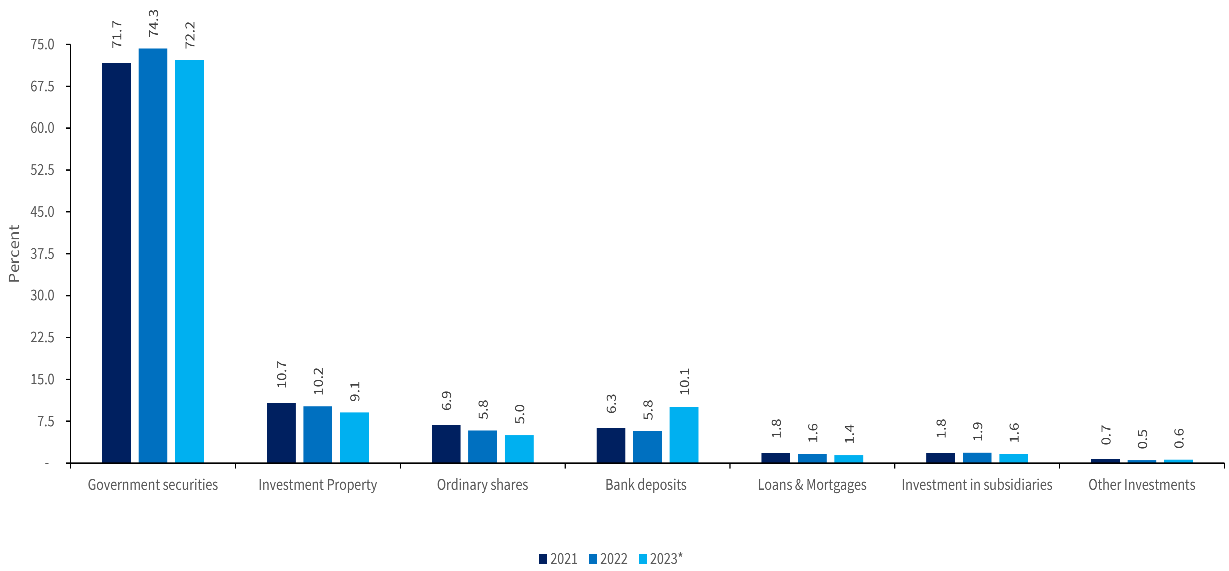
Table 7: Key Performance Indicators for Insurers

	Years							
	2017	2018	2019	2020	2021	2022	2023*	Annual Change
	KSh 'Mn	KSh 'Mn	KSh 'Mn	KSh 'Mn	KSh 'Mn	KSh 'Mn	KSh 'Mn	
Gross Premium Income	209,001,289	216,261,729	229,499,718	234,775,753	273,710,831	310,273,121	359,863,182	16.0%
Net Premium Written	165,852,034	172,322,202	182,658,282	187,853,004	221,133,803	249,190,282	282,604,661	13.4%
Claims Incurred (Gen. Business)	56,151,961	56,928,003	58,961,581	58,311,459	69,835,740	77,095,539	86,088,916	11.7%
Commissions	12,495,181	11,487,628	10,957,562	11,157,093	13,521,938	15,341,053	16,954,486	10.5%
Management Expenses	41,197,262	44,072,857	45,702,207	44,173,611	46,513,554	50,280,745	55,261,081	9.9%
Investment Income**	51,675,571	44,514,367	66,982,398	50,608,392	70,308,222	66,827,002	76,459,990	14.4%
Profit/Loss After Taxation**	13,642,972	7,269,268	15,119,928	6,388,955	8,645,622	14,715,312	19,709,565	33.9%
Investments**	483,799,656	524,237,249	594,568,115	656,460,833	733,461,323	833,722,972	938,330,056	12.5%
Assets**	590,953,337	635,035,110	709,045,429	765,932,477	850,506,382	956,871,079	1,063,777,583	11.2%
Shareholders' Funds**	147,255,007	149,134,602	161,635,278	166,069,303	167,914,107	184,166,513	202,626,095	10.0%
Key Performance Ratios for Insurers (Per cent)								
ROA	3.2	1.8	2.9	1.3	1.6	2.4	2.7	0.3
ROE	9.7	4.9	9.7	3.9	5.2	8.4	10.2	1.8
Combined ratio Gen Business)	101.1	102.8	103.4	102.5	106.2	102.9	103.9	1.0
Insurance Penetration Ratio	2.7	2.4	2.3	2.2	2.2	2.3		

* Provisional unaudited data
**Amounts include reinsurance 2.4
Source: IRA

The sector's total assets grew by 11.3 percent to KSh 1.1 trillion as of December 2023, reflecting strong growth in investments. Investment in long-term (life) was the highest, at KSh 695.4 billion or 80.9 percent while general business accounted for 19.1 percent or KSh 164.0 billion in earning assets. Investments remain highly concentrated in government securities, accounting for 72.2 percent of total assets. This was followed by bank deposit, property and ordinary shares at 10.1 percent at 9.1 percent a 5.0 percent, respectively. High interest rates environment could explain the assets allocation in 2023 as indicated by increase in uptake of government securities and bank deposits **(Figure 32)**.

Figure 32: Insurance Sector Assets Class



Source: Insurance Regulatory Authority

The increase in the share of bank deposits to 10.1 percent in 2023 from 5.8 percent of total investments in 2023 may be as a result of higher deposits rates being paid by banks, thus improving earnings for insurance companies. This however introduces increases contagion risk due to increased interconnectedness between banks and insurance. The increase in the uptake of insurance services, adoption of digital methods in the payment of premiums and verification of insurance covers and claims also contributed to increased profitability.

The high interest rates on government securities following monetary policy tightening saw the investment income rise to KSh 76.49 billion in 2023 from KSh 66.83 billion in 2022. While this reflects the sector's tendency to invest in safe assets, it exposes insurers to the sovereign risk. This however increases market risk as interest rates rise further leading to fluctuations in the market values on bonds. The income of insurance companies investing in securities could reduce in the event of interest rate reversals. Strong growth in investment income largely explains the 33.9 percent growth in profits before tax in 2023, implying a reversal in interest rates could impact income and profitability.

Risks Assessment and Outlook

The sector is faced with both/or either increasing risks in magnitude and/or new ones are emerging, with implication on sector stability. Specifically:

- Insurance risk due to the nature of insurance contracts to receive premiums and offer protection against loss. Insurance risk measured by combined ratio for the general insurance business moderated to 102.9 percent in 2022 from 106.2 percent in 2021, implying that although commissions, claims and expenses still exceed insurance revenue, risk is easing partly due to improved products design, pricing, underwriting, reinsurance arrangements, reserving, and claims management.
- Market risk arises from adverse fluctuations in market interest rates or asset prices resulting in overstating of assets /or understating of liabilities. Insurance companies are exposed to equity securities price volatility. In 2022, the equities declined by 0.1 percentage points,

and this has further worsened in the first half of 2023. Risks arising from monetary policy tightening in advanced economies and challenging economic conditions locally are expected to drive equity prices even lower and push interest rates higher, leading to large mark to market losses.

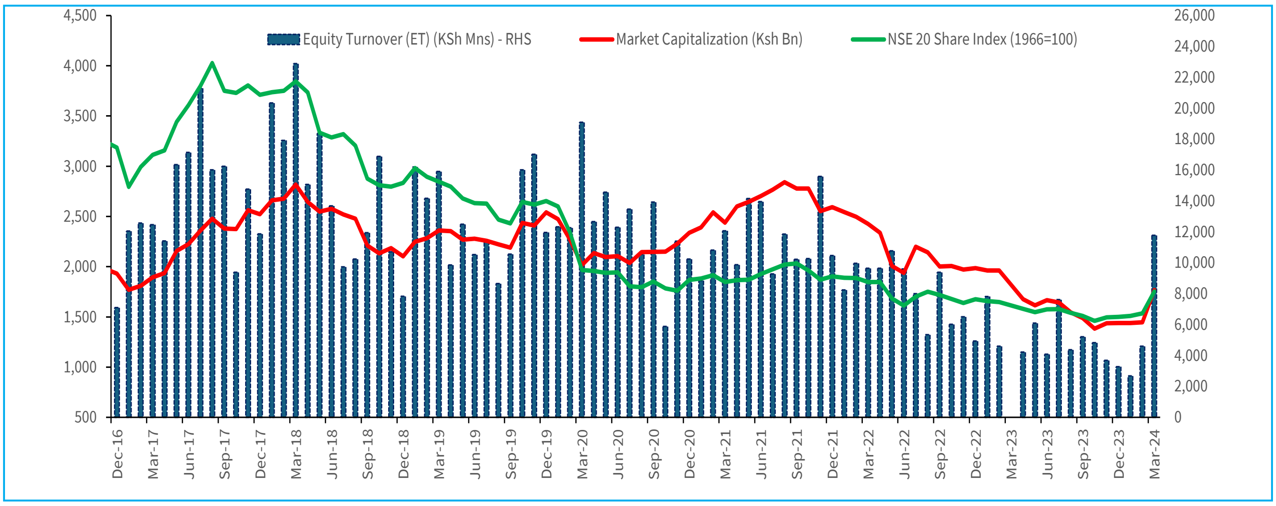
- Loans and mortgages constituted about 1.4 percent of the insurers' portfolio. In addition, amounts due from reinsurers in respect of claims already paid, amounts due from insurance intermediaries, amounts due from corporate bond issuers, cash, and deposits held in banks, reinsurer's share of insurance liabilities and reserves and retrocession assets for reinsurers increase credit risks exposure to insurers. The credit risk exposure from outstanding premiums and reinsurance recoveries increased by 8.1 percent, to KSh 191 billion in 2023. Insurers and reinsurers are required to constantly monitor risk profile of their creditors and make sufficient provisions and write-offs to ensure adequate valuation of debtors.
- Cybersecurity threats and insurance frauds have increased on growing use of digital channels and internet-enabled devices, systems, and processes. Paying insurance premiums and processing of claims digitally brings efficiency gains to the sector but has come with increased exposure to cyber frauds. Underwriting insurance digitally may lead to risk-premium mismatch, exposing insurers to losses. Cyber security risks remain elevated following flexible working hours and working from home due to limited security in home set-ups or outside the office.
- Insurance companies are relying on modern technologies in the offering insurance products and services to their customers and potentials. Insurers are capitalizing artificial intelligence (AI) for data collection and analytics to improve underwriting and operational efficiency and improved profitability. Regulators too are investing in RegTech and SupTech in regulating and supervising entities under their purview. This digital disruption is coming with costs and risks associated with technology, including increased unauthorised customer data access and misuse. Data breaches and cyberattacks can result in financial losses, reputational damage, regulatory penalties, and legal liabilities. Technology enabled fraud has increased in the insurance sector., yet some cases are undetected and/or unreported to the relevant authorities. There is need to develop fraud risk management including data and information sharing arrangements.
- Ukraine War impacted supply chain negatively, leading to increased energy and food prices, while Middle East conflict is disrupting shipping lines, increasing prices and insurance claims. This reduces disposable incomes of households and affordability of insurance services. This has also increased insurance and freight costs for marine and air cargo businesses. The risk was even higher for companies highly exposed to Russian or Ukrainian companies and those transiting Middle East.
- The sector faced frequent episodes of riots and/or civil unrest, causing a disruption to business and damages to property. Companies had to take mitigation measures that negatively impacted insurance business as well as low investment returns.

Overall, the insurance sector outlook remains positive in terms of growth, stability, and resilience. The IRA has enhanced surveillance and taken measures to address existing challenges to improve the sector's performance. Adoption of technology and digital platforms, and other innovative distribution channels continue to support efficiency and growth of the sector. As the economy recovers, insurers see opportunities to innovate and come up with value-based products meeting consumer needs.

2.3 Capital Markets

Capital markets performance reflected price shocks, interest rate risks and increased market volatility in 2023 (Figure 33). While investors deployed hedging strategies including single stocks and index futures to mitigate market risk in 2023, the NASI, NSE 20 and market capitalisation declined by 11.9 percent, 23.4 percent, and 23.4 percent, respectively as of December 2022 compared to December 2021.

Figure 33: Select Equities Market Performance Indicators

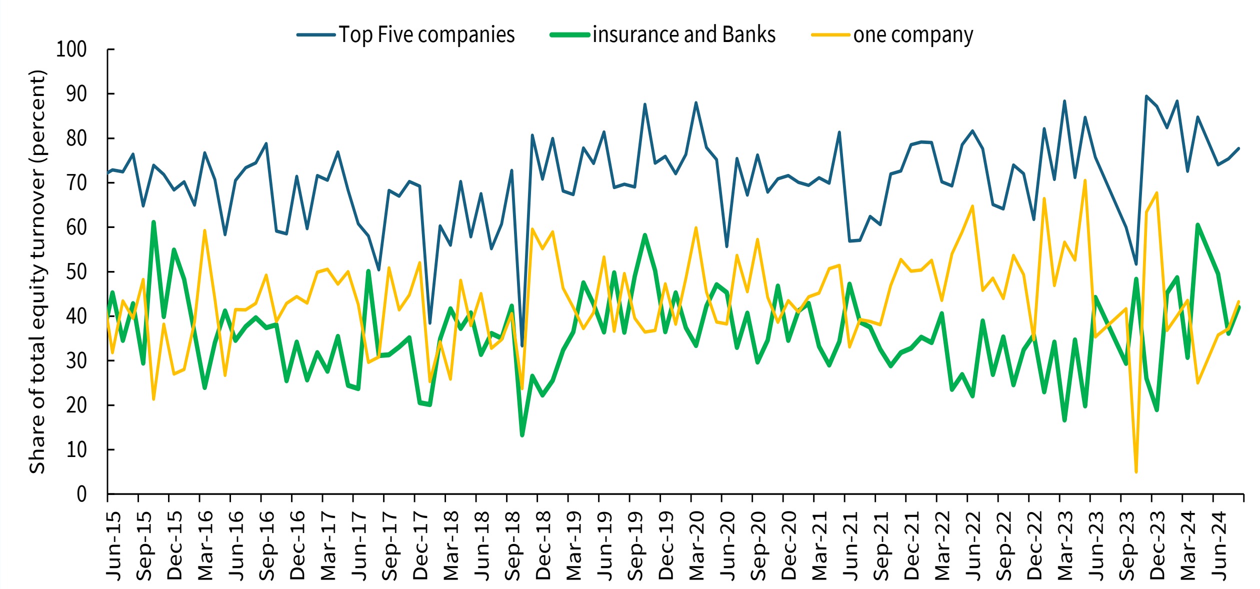


Source: NSE data

By end of June 2024, NASI, NSE 20 and market capitalisation increased by 18.9 percent, 10.3 percent, and 18.9 percent, respectively, from their December 2023 level. Compared with December 2022, NASI, NSE 20 and market capitalisation declined by 28.0 percent, 10.4 percent, and 28.0 percent, respectively, by end December 2023. Consistent with other market indicators, total equity turnover declined by 33.6 percent, but total shares traded increased by 26.7 percent, respectively in 2023 compared with 2022, implying equities bear market as global risks spillovers persisted. However, as of June 2024, total equity turnover and total shares traded increased by 53.1 percent and 33.9 percent compared to the level in December 2023, signifying improving market conditions.

The liquidity of the equities (sum of equities turnover divided by end year market capitalisation) has maintained downward trajectory since 2015, albeit moderate increase in 2023 compared to 2022, reflecting a bear equities market. Implementation of securities lending reforms to spur liquidity by allowing market participants to buy and sell securities not owned by them has not borne fruits. It may also reflect lack on initial public offerings and other innovative products. Market concentration risk remains high, with top five listed firms accounting for an average of 80 percent of total equity turnover in 2023 compared to 72.7 percent in 2022 **(Figure 34)**.

Figure 34: Market Concentration Risk remains



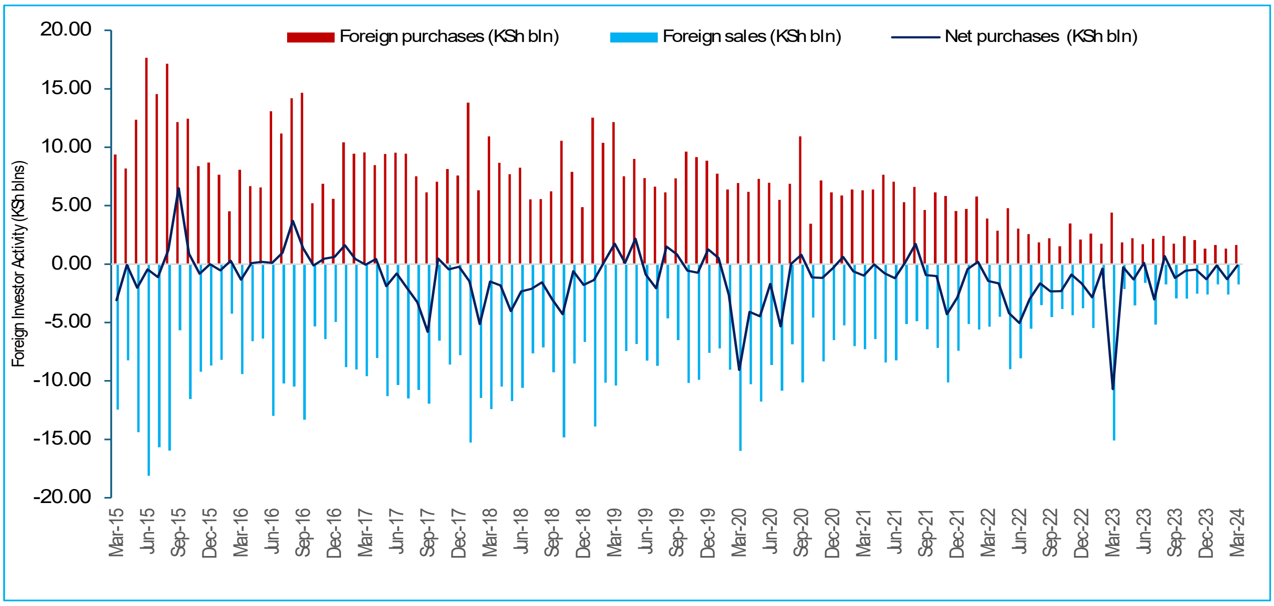
Source: NSE data

The financials (insurance &banks) accounted for 31.4 percent while Telecommunications (Safaricom only) accounted for 50.0 percent of total equity turnover in 2022. The primary market for equities remained subdued in 2023, with no new listing of shares through Initial Public Offering (IPO), Rights Issues or share splits.

Foreign investors at the Nairobi Securities Exchange (NSE) continued to reduce their portfolio holding in 2023 into first quarter of 2024 contributing to further decline in market activity. More sales than purchases have persisted since March 2020, albeit slight net inflows in September 2020, and September 2021. Overall, the market remained on net outflow in 2023 and first quarter of 2024, highlighting the impact of rising global interest rates as advanced economies tighten monetary policy, domestic business environment and firm-specific challenges **(Figure 35)**.

The sell-off at the NSE could also be attributed to the tight financial conditions in international markets as central banks in advanced economies tightened their monetary policies to historic highs. As a result, interest rates in advanced and emerging markets have risen sharply, leading to significant increase in interest rate differential between Kenya and the advanced countries interest rates. The increase in interest rate differential motivates investors searching for higher returns to sell equities contributing, hence increased volatility at the NSE.

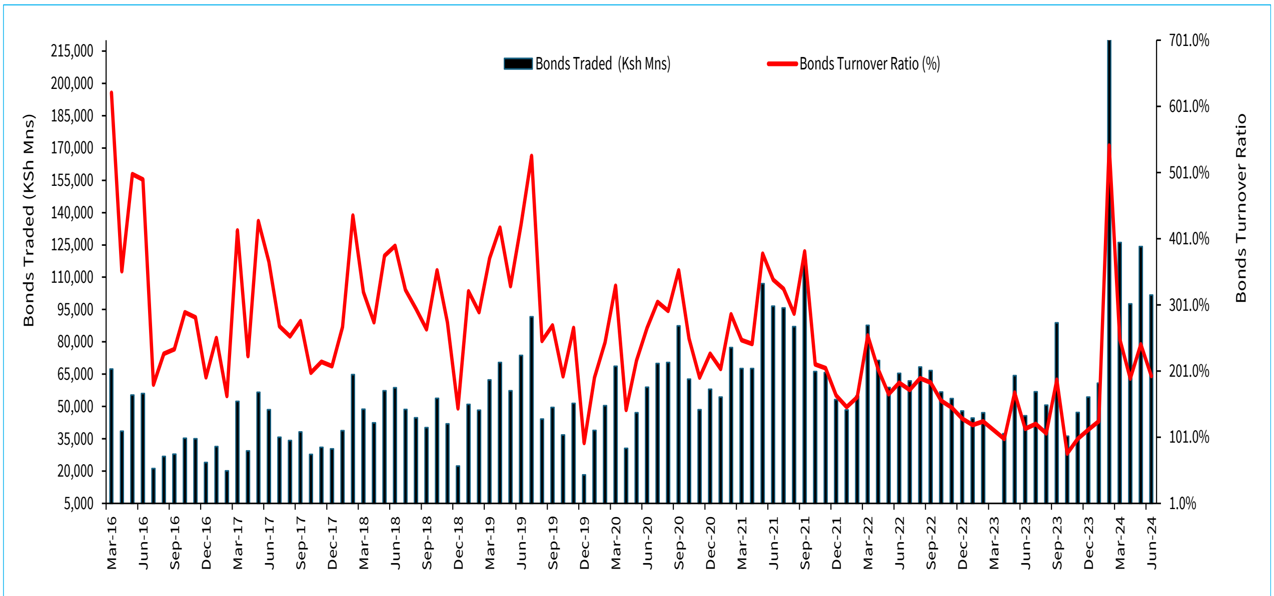
Figure 35: Foreign Investor Activity at the NSE



Source: NSE data

Fixed income segment of NSE remained subdued in 2023. The corporate bond market for instance, did not have initial public share offer in 2023 and 2024. The outstanding corporate bonds amounting KSh 29 billion were not traded between the second quarter of 2023 and 2024. The bear equities corporate bonds markets also affected activity in the market for treasury bonds in 2023. Treasury bonds recorded undersubscriptions in the primary market and increase in holding more bonds under Held to Maturity. This contributed to a decline of bonds trading in the secondary market by 15.2 percent to 644.0 KSh billion in 2023 from KSh 741.8 billion in 2022. Most investors held bonds to maturity as indicated by low bonds turnover ratio (value of bonds traded against outstanding tradable bonds), exacerbating tight liquidity for investors in bonds and dislocation of the yield curve **(Figure 36)**.

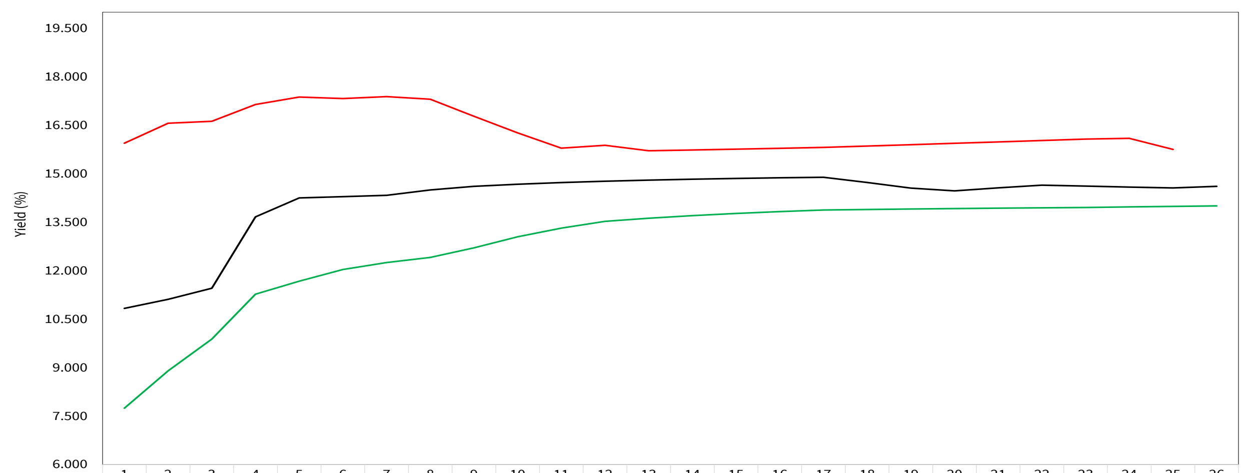
Figure 36: Local Currency Bonds Secondary Market Activity



Source: NSE and CBK datasets

The sharp increase in interest rates partially explains reduced trading of longer maturity bonds to mitigate marked-to-market losses. This has contributed to reduced trading activity in the secondary market in 2023. Bonds trading however rebounded strongly, in the first seven months of 2024, reaching a historical high of KSh 1, 172.9 billion, and closer to KSh 957 billion traded in 2021. Low demand amid rising interest rates, pushed the Government Securities Yield Curve outward, signalling higher domestic debt cost **(Figure 37).**

Figure 37: Yields of Government Bonds



	1	2	3	4	5	6	7	8	9	10	11	12	13
19-Jul-24	15.9	16.5	16.6	17.1	17.3	17.3	17.3	17.3	16.7	16.2	15.7	15.8	15.7
26-May-23	10.83	11.11	11.46	13.66	14.25	14.29	14.33	14.5	14.61	14.68	14.73	14.77	14.8
27-May-22	7.744	8.901	9.881	11.27	11.67	12.04	12.25	12.41	12.71	13.05	13.32	13.53	13.62

	14	15	16	17	18	19	20	21	22	23	24	25	26
19-Jul-24	15.7	15.7	15.7	15.8	15.8	15.8	15.9	15.9	16.0	16.0	16.0	15.7	
26-May-23	14.83	14.85	14.87	14.89	14.73	14.56	14.47	14.56	14.65	14.62	14.59	14.56	14.61
27-May-22	13.7	13.77	13.83	13.88	13.89	13.91	13.92	13.93	13.95	13.96	13.97	13.99	14

Time to Maturity

Source: NSE

Risks Assessment and Outlook

- Technology related risks associated with increased adoption of digital platforms, innovations, and automation of processes are emerging. The CMA introduced Regulatory sandbox to allow testing of these new innovations at limited scale prior to their roll–out at commercial scale.
- A mix of global and domestic economic and financial system challenges continues to impact capital markets negatively. Further tightening of monetary policy in advanced economies, elevated inflationary pressures, and escalation in Russia-Ukraine war are expected to heighten risks and intensify volatility in 2022. Recovery in investor appetite and overall market performance remains slow and is expected to remain bearish in 2023. However, strong economic recovery and stability, are expected to shape the capital markets performance in 2023.

2.4 Pensions Sector

The pensions sector has grown significantly by assets since 2016 **(Table 7).** The pensions assets under management increased by 72.7 percent, mainly driven by more than 100 percent growth in government securities, guaranteed funds and offshore assets. Investment in the listed corporate bonds and REITS however declined during the seven-year period **(Table 8).**

Table 8: Pension Sector Assets Allocation

Asset Class	2020		2021		2022		2023	
	KSh Bn	%	KSh Bn	%	KSh Bn	%	KSh Bn	%
Government Securities	625.7	44.7	707.0	45.7	722.0	45.8	818.9	47.5
Quoted Equities	218.1	15.6	254.6	16.5	215.2	13.7	145.1	8.4
Immovable Property	251.3	18.0	254.5	16.5	248.4	15.8	242.1	14.0
Guaranteed Funds	230.6	16.5	259.8	16.8	298.0	18.9	358.1	20.8
Listed Corporate Bonds	5.3	0.4	6.8	0.4	7.8	0.5	6.6	0.4
Fixed Deposits	39.0	2.8	27.9	1.8	42.2	2.7	81.9	4.7
Offshore	11.4	0.8	19.4	1.3	14.1	0.9	27.2	1.6
Cash	12.2	0.9	9.5	0.6	16.8	1.1	25.0	1.4
Unquoted Equities	3.4	0.2	3.5	0.2	5.0	0.3	3.6	0.2
Private Equity	1.7	0.1	3.0	0.2	3.6	0.2	5.7	0.3
REITs	0.3	0.0	0.4	0.0	0.3	0.0	11.1	0.6
Commercial paper, non- listed bonds & Others	0.0	-	1.1	0.1	2.7	0.2	0.02	0.001
TOTAL	**1,398.96**	**100.00**	**1,547.43**	**100.00**	**1,576.21**	**100.00**	**1,725.44**	**100.00**
Overall Risk Score		**3.15**		**2.98**		**2.96**		**2.94**

Source: RBA

The total assets of the pensions sector grew by 9.5 percent to KSh 1.73 trillion in December 2023 from KSh 1.58 trillion in December 2022. The top three asset classes that recorded the largest scale-down during the period are quoted equities that shed 32.6 percent, corporate bonds holding that had -15.4 percent and investment in immovable property with -2.5 percent. The slow recovery in real estate is attributed to the adverse effects of the COVID-19 pandemic as well as other new local and global risks. The decline in quoted equities reflects the bear run market at the NSE, with most shares having fallen in prices significantly. This is attributed to effects of monetary policy tightening in advanced countries that has reduced portfolio inflows, led to more foreign investor outflows, and drove investors to more to safe assets, mainly government securities. The investment under any other.

Key Risks and Mitigation Measures

The pension subsector is facing the following risks in 2024:

i. **Funding Risks:** The risk manifests through underfunding in defined benefits schemes and unremitted contributions in defined contribution schemes. The funding challenge is mostly experienced in government, quasi government institutions and county government schemes. The average funding level for the 55 defined benefits schemes under the regulation of RBA is 98.5 percent. Specifically, 31 schemes had funding levels above 100 percent while 24 schemes had funding level below 100 percent, resulting to the average funding level of 98.5 percent. In addition, unremitted contributions, mostly for the public sector schemes, increased to KSh. 94.6 billion as of March 2024.

ii. **Investment/Market Risks:** The performance in the stock market is unstable and has exhibited high fluctuation. The pension assets investment has also been adversely affected by the high interest rates and other market prices.

iii. **Legal and Regulatory Risks:** Frequent changes in the legal and regulatory framework governing the retirement benefits sector may affect the sustainability of the sector.

iv. **Operational Risks:** Most of the schemes are small and may not have adequate internal controls, systems and resources to adequately manage pension scheme assets.
v. **Agency Risk:** The retirement benefits sector has outsourced most of its services including administration, custodial and fund management. This therefore poses a risk to the sector due either to excessive fees or conflict of interest among the players.

Cognizant of these risks, pension schemes have adopted various mitigation measures to minimise the risks. These include

i. **Diversification of investments:** The investment assets classes have been expanded to 15 asset classes to accommodate alternative assets. The investment limits have been provided to guard against over-exposure and concentration risks.
ii. **Review of the regulatory framework:** The regulatory framework is reviewed regularly to capture emerging issues and incorporate new and innovative products.
iii. **Innovation in the subsector:** The subsector encourages new ideas and innovative products targeting the under covered population in the informal sector. The new products include hustler fund saving component, which is a bundled product consisting of credit and savings facilities for both short term and long-term purposes.
iv. **Consumer Protection:** Development of guidelines to ensure good governance in schemes and protection of members' and sponsors' interest. In this regard the sector is implementing the governance guidelines and the treating customer fairly guidelines.

The sector is expected grow in 2024 owing to the positive economic prospects, rebound of the stock market and key reforms by the government.

2.5 Sacco Sector

Savings and Credit Cooperatives (Sacco) Societies build on the momentum of 2022, after recovering from COVID-19 shock to grow in 2023 and the first half of 2024. A total of 357 licensed SACCOs were operational in 2023, of which, 176 were deposits taking while 181 were non-deposits taking. The total assets increased by 28.4 percent in 2023 compared to 9.1 percent in 2022, mainly driven by growth in gross loans. The SACCOs sector was able to attract deposit from members, which increased by 29.7 percent, providing a stable funding base for loans. The SACCOs also funded loas to members using borrowed funds which increased by 10.2 percent **(Table 9)**.

Table 9: Sector Key Indicators for Deposits Taking SACCOs (KSh Million)

	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Change 2023/2022
Total Assets	392.8	441.8	497.3	555.9	630.9	700.3	764.2	981.5	28.4
Gross Loans	291.4	331.3	373.2	420.5	474.7	523.0	586.0	759.0	29.5
Total Deposits	272.4	307.0	342.3	381.1	431.1	473.3	522.4	677.8	29.7
Core Capital	58.1	66.8	78.3	95.1	100.4	119.6	142.3	162.3	14.0
Institutional Capital	34.0	38.8	46.3	59.3	59.8	73.6	90.6	104.0	14.9
External Borrowings	20.2	21.8	22.2	22.1	23.5	24.8	24.3	26.8	10.1
Earning Assets	313.5	357.0	403.8	455.6	517.0	567.4	574.4	838.7	46.0
Liquid Assets	40.3	47.1	55.2	67.7	85.8	105.9	108.0	126.5	17.2
Non-Performing Loans	14.8	19.9	22.9	25.9	32.9	35.4	48.4	44.4	-8.33
Loan loss Provision	8.9	11.2	14.6	18.6	23.9	26.2	37.5	43.8	16.8
Gross Income	52.6	60.7	69.3	80.2	84.5	96.5	105.6	140.9	33.5
Operating Expenses	18.3	20.7	23.1	25.7	26.9	31.5	36.0	43.9	22.0
Net Interest margin	29.0	33.0	41.7	44.1	48.9	58.0	62.8	76.5	21.8
Short term Liabilities	79.4	86.8	100.2	133.2	121.2	138.6	147.3	176.4	19.7
Net Financial Income	31.4	36.1	41.7	47.5	52.0	59.4	66.4	85.1	28.03
Membership					5,823,173	5,999,574	6,420,491		6,842,307

Source: SASRA

The significant increase in external borrowing can be attributed to SACCOs offering loans at lower interest rates than banks and digital credit lenders. In this regard, SACCOs are capitalising on the lower cost of deposit from members to meet demand for lower cost loans as members shift from high-cost credit. The rapid expansion of asset relative to expenses resulted to increase in profit as of December 2023 and the first half of 2024. Return on assets increased from 9.1 percent in 2022 to 9.8 percent in 2023. This is on account increase net interest income and improvement in efficient because of the SACCOs deploying technology in their operations

Despite decline in core capital to total assets and institutional capital to total assets from 18.6 percent and 11.9 percent to 16.5 percent to 10.6 percent they were above the minimum regulatory requirement. The quality of assets improved with NPLs to Gross loans declining 2.4 percent, while provision for NPLs increased by 16.8 percent compared to the growth rate of NPLs which declined by 8.3 percent.

In addition, liquidity ratio stood at 71.8 percent, which is above the regulatory requirement of greater than 15 percent. This enabled SACCOs to meet their short-term liabilities, while maintaining adequate buffers against liquidity shocks. The soundness and stability of SACCOs enabled them to effectively intermediate funds and improve profitability.

Table 10: Financial Soundness Indicators (FSIs)

Sector /FSI/(Quarter/ Year)	Threshold	16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec
Core Capital	KSh 10M	58,135	66,825	78,267	95,128	100,381	119,557	142,325	162,273
Core Capital/Total Assets	10	14.8	15.1	15.7	17.1	15.9	17.1	18.6	16.5
Core Capital/Total Deposits	8	21.3	21.8	22.9	25.0	23.3	25.3	27.2	23.9
Institutional Capital/Total Assets	8	8.7	8.8	9.3	10.7	9.5	10.5	11.9	10.6
ASSET QUALITY									
Non-performing loans/ Gross Loans	<5	5.1	6.0	6.1	6.2	6.9	6.8	8.3	5.9
(Non-performing loans-Provisions)/Core Capital		10.1	13.0	10.6	7.8	9.0	7.7	7.7	0.4
Earning Assets/Total Assets		79.8	80.8	81.2	82.0	82.0	81.0	75.2	85.5
EARNINGS									
Return on Assets		0.0	8.7	8.9	9.0	8.8	8.9	9.1	9.8
Cost Income ratio		58.1	57.3	55.3	54.2	51.7	53.1	54.2	51.6
Net Interest margin		0.0	7.9	8.9	8.4	8.2	8.7	8.6	8.8
Operating expense ratio		0.0	5.0	4.9	4.9	4.5	4.7	4.9	9.0
LIQUIDITY RATIO									
Liquidity ratio	=>15	50.8	54.2	55.1	50.8	70.8	76.5	73.3	71.8
Liquid Assets/Total Assets		10.3	10.7	11.1	12.2	13.6	15.1	14.1	12.9
Liquid Assets/Total Deposit liabilities		14.8	15.3	16.1	17.8	19.9	22.4	20.7	18.7
External Borrowings/Total Assets	<=25	5.2	4.9	4.5	4.0	3.7	3.5	3.2	2.7
Total Gross Loans/Total Deposits		107.0	107.9	109.0	110.4	110.1	110.5	112.2	112.0

Source: SASRA

Key Developments and Risks

During the year under review, taking cognisant of the myriad challenges faced by many small and medium sized SACCOs, the sub-sector championed the establishment of SACCO Central, a secondary SACCO to provide plat platform for shared services and central liquidity facility through inter-Sacco borrowing. This is expected strengthen small, regulated SACCO businesses to achieve economies of scale and hence improve financial stability in the Sacco industry. It will also help better manage risk, keep abreast with technology, and access national payment systems from a common entity. A total of 55 SACCOs have subscribed to SACCO Central's initial capital contribution, which is to be complimented by financial support from Government through the SAFER project. The initiative is industry-led while SASRA has been coordinating the activities.

Risks, Mitigations and Outlook

Regulated SACCOs, like other financial institutions, are exposed to a myriad of risks including but not limited to cybersecurity, credit, financial, market, and governance risks among others. Regulated Saccos continues to develop and implement strategies to mitigate these risks. During the period under review, the Authority implemented several strategies to improve the resilience and stability of the industry taking into consideration the emerging risks. These included the issuance of circulars & guidelines, and capacity-building initiatives in collaboration with other government agencies. The key risks within the industry are highlighted below;

i. **Cybersecurity risks:** The financial services sector has become very competitive due to constant technological changes. To remain competitive, regulated SACCOs adopted digital financial service delivery channels and mobile banking services. To deliver these services effectively and efficiently, regulated SACCOs have partnered with and or contracted third-party information technology system vendors commonly referred to as integrators/FinTech. FinTech pose the highest cyber risks due to increased cyberattacks and data breaches leading to financial loss to the SACCOs.
ii. **Concentration risk:** The sector is highly concentrated whereby 37 SACCOs whose total assets exceed KShs.10 billion and are classified under the tier 1 category account for 80% of the total assets in the regulated Sacco Industry. This category of regulated SACCOs has the financial and technical capability to better manage risks, market products, educate their members, and acquire appropriate technology and physical infrastructure to achieve business growth. However, vulnerabilities in this saccos can undermine confidence of the public in the SACCOs movement leading to withdrawal of deposit.
iii. **Safety nets:** To safeguard SACCO member deposits from cyber risks, SASRA issued a circular requiring Saccos to undertake thorough vetting when procuring services of FinTech and take insurance against the risks. Vendors are also expected to form an association to practice some level of self-regulation and organize a monthly regular forum for sharing experiences and trends of threats and devise strategies to mitigate the risks.
iv. **Un-Regulated Financial Cooperatives:** The Authority currently regulates deposit-taking Saccos, specified non-withdrawable deposit-taking Saccos with deposit limits of Kshs.100million and above, leaving out those with deposits below KSh 100 million, Housing and Investment Cooperatives. This provides regulatory arbitrage opportunities which poses reputational risks in the industry. Unregulated financial cooperatives have close business associations with the regulated SACCOs either through subsidiary arrangements or investments, thus risking members' funds when these entities are in financial distress.
v. **Credit Risks:** Regulated SACCOs had facilitated loans and advances amounting to KSh 759.0 billion in 2023. The NPLs to gross loans was 6.52 percent down from 8.28 percent in 2022. Some regulated SACCOs however had higher NPLs ratio above industry average, due to sectoral exposure.
vi. **Safety net:** SASRA has asked SACCOs to adopt credit administration strategies including debt collection practices to reduce credit risk. Those serving salaried members have been advised to ensure choose Front Office (FOSA) as the salary pay point to reduce the risks of unremitted or delayed remittances. SASRA has also cautioned members of the public including regulated SACCOs to restrict their business to licensed and regulated entities. Additionally, regulated SACCOs have been restricted to limit their business to core activities to guarantee their safety and continued operations.

3. FINANCIAL MARKETS INFRASTRUCTURE DEVELOPMENTS AND RISKS

This chapter reviews performance and discusses risks outlook the financial markets' infrastructure it covers retail and wholesale (systemically important) national payments and settlements systems, and regional payments and settlement systems. The recent transformative innovation in the Kenya's government securities market, which culminated in the upgrade of the central securities depository to *Dhow* Central Securities Depository (*Dhow* CSD), has also been incorporated. The Chapter also provides a high-level summary of public participation on the Central Bank Digital Currency (CBDC) and ends with risks outlook.

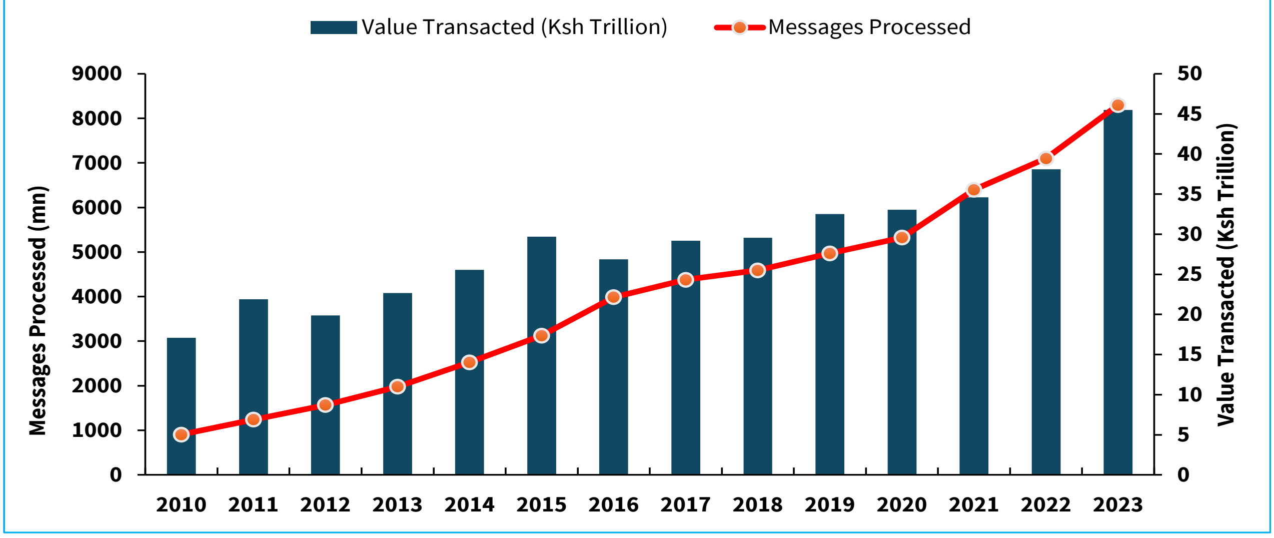
3.1 Payments and Settlement Systems

The Central Bank of Kenya is mandated by Act of Parliament to formulate and implement such policies as best to foster the establishment, regulation, and supervision of efficient and effective payment, clearing and settlement systems. Kenya's National Payment System comprises of; large-value payment system or the Real Time Gross Settlement (RTGS) system, also known as Kenya Electronic Payment and Settlement System (KEPSS); low-value (retail) payment system (mobile money, cards, electronic funds transfers (EFT) and cheques); and regional payments system. The latter clears and settles through the links established by EAC and COMESA central banks with KEPSS.

Overall, the national payment systems continued to play its critical role of facilitating transactions efficiently and effectively in 2023. This has contributed to enhanced trust and confidence among users, which is crucial in supporting the economy. The fast changing consumer behaviour due to changes in the demographic dynamics and technological innovations have contributed to rapid growth in digital financial services that support health, agriculture, education, and transport sectors. This further highlights importance of having an efficient and stable digitalised economy envisaged under economic pillar of Vision 2030.

Kenya's Real Time Gross Settlement (RTGS) system, which is the country's systemically Important Payment System, processed 8.3 million transaction messages worth KSh. 45.5 trillion in 2023, which was 7.1 million messages worth KSh. 38.1 trillion above 2022 level. The increase in the volume and value of transaction processed indicates recovery in economic activities post-COVID–19 pandemic and operational efficiency of KEPSS that guarantees speed, security, and reliability.

Figure 39: Volume and Value Transacted Through KEPSS



Source: CBK National Payments Data

3.1.1. Key risks for KEPSS in 2023

Settlement risk: The growth in the values and volumes processed through the RTGS system requires stronger oversight to ensure appropriate measures are put in place to mitigate potential risks, such as fraud related to endpoint security and liquidity risk. These are critical for effective settlement of obligations and enhancing confidence among users of finality and irrevocability of payment instructions.

Systemic Risk: KEPSS operations and settlements serve highly interconnected participants, thus a potential source of systemic risk. The ability to settle transactions by counterparties underpins the smooth functioning of the KEPSS. The CBK reviews its mitigating measures including provision of intraday liquidity facility to minimise counter party risks.

To align KEPSS platform to best practices, Kenya's payments industry commenced transition to new transaction messages formats – ISO 20022. This is a common, global and end-to-end standard that is expected to standardise communication, enhance data quality and customer experience. It is also aimed at enhancing security and governance of the messages. The process of migrating KEPSS platform to ISO 20022 compliance is to be completed by end of 2024.

3.2. Regional Cross-border Payments Systems

Kenya's regional interconnectedness through trade led to the need for a well-functioning Regional Payment and Settlement Systems to facilitate cross-border payments and settlements. Relative to 2022, transactions settled through the East African Community (EAC) Payment and Settlement System (EAPSS) had mixed performance in 2023. While the number of messages through EAPSS declined by 17.1 percent in 2023 compared to 2022, the value of transaction settled increased by 10.0 percent or USD 82.1 million **(Table 11)**.

Table 11: Transactions via Regional Payments Systems

TRANSACTIONS SETTLED VIA REPSS					TRANSACTIONS SETTLED VIA EAPSS						
Year	Value (USD Million)	Volume	Value (EURO)	Volume		Volume			Value (USD Million)		
					Year	Inward	Outward	Total	Inward	Outward	Total
2020	76.04	910.00	401,562.00	4.00	2020	9,867.00	18,544.00	28,411.00	221.95	234.12	456.07
2021	90.70	1,260.00	480,500.29	23.00	2021	10,763.00	23,179.00	33,942.00	300.09	298.76	598.85
2022	106.49	1,426.00	628,998.00	18.00	2022	15,249.00	28,803.00	44,052.00	407.17	415.73	822.90
2023	111.00	1,586.00	876,310.00	11.00	2023	15,609.00	20,907.00	36,516.00	449.00	456.00	905.00

Source: CBK

As compared to the COVID-19 Pandemic period, however, the number of messages processed through EAPSS rose from 28,411 in 2020 to reach the peak of 44,052 in 2022 albeit easing to 36,516 in 2023. The value of the transactions concluded has however maintained strong growth, from USD 456 million in 2020 to USD 905 million in 2023 or 98.4 percent growth. This highlights growing importance of this system in the EAC regional trade and its stability.

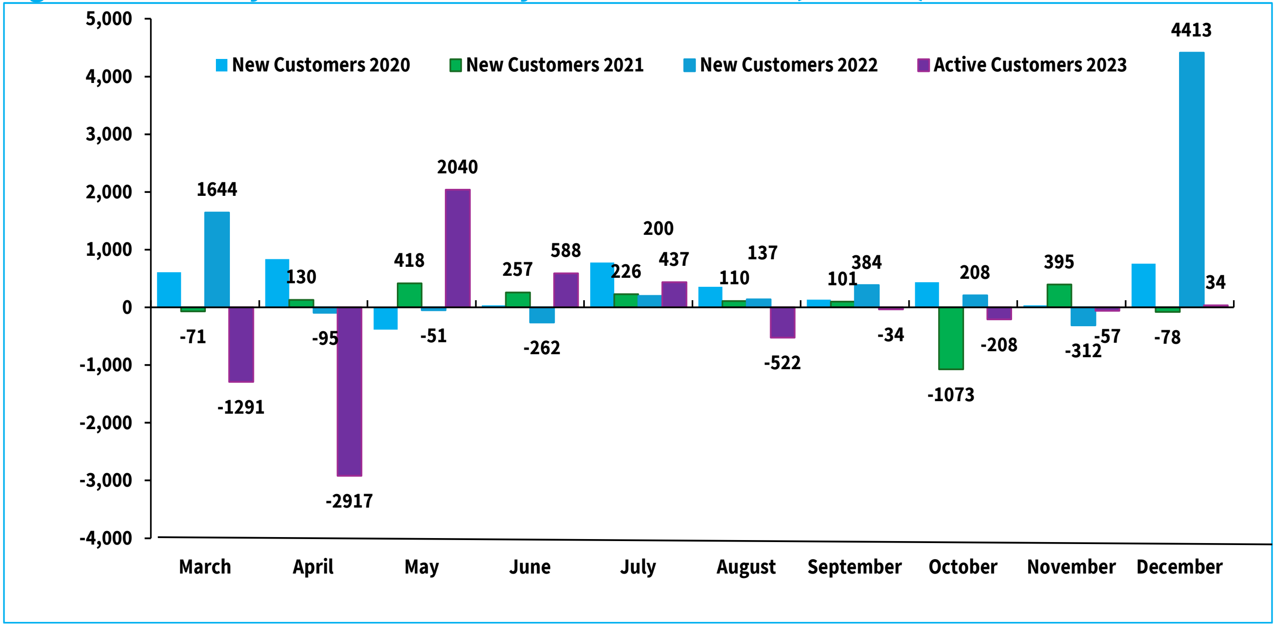
Like the EAPSS, the Common Market for Eastern and Southern Africa (COMESA) Regional Electronic Payment and Settlement System (REPSS) continue to record steady growth since operationalization in 2019. While the number of messages processed increased from 1 in 2019 to 11 in 2023, the value of transactions settled through REPSS increased from Euros 4,538 to Euros 876,310 during the period. On the USD side of REPSS, the number of messages increased from 659 in 2019 to 1,586 in 2023 with corresponding value of the transactions settled rising to USD 111 million in 2023 from USD 55.7 million in 2019. The steady growth signifies recovering growing cross-border trade within these economic blocs. Stability of these regional payments infrastructure is therefore critical for the regional economies and financial system stability.

Noting that the two regional payments and settlement systems serve the wholesale users, the African Export and Import Bank (Afreximbank) introduced the Pan-African Payment and Settlement System (PAPSS) in 2021. PAPSS was meant to complement the COMESA Business Council's (CBC) cross border retail payment scheme, targeting Micro Small and Medium Enterprises (MSMEs) operating within the COMESA region. PAPSS is a continental payment system designed to connect all banks, non-banks, switches, and regional systems in Africa to enhance the cross-border payment efficiency across Africa. PAPSS is still at infancy stage to enable one to make meaningful assessment on its robustness with respect to intended customer base and the risks thereof.

3.1.2 Retail payment system

The retail payments system serves the highest number of customers and the value of transactions and therefore has wider outreach in the economy. The retail payments system comprises of twelve Payment Service Providers (PSPs mobile money, Pesalink, cards, cheques, and electronic funds transfers (EFTs) that facilitate end-to-end business and households' transactions. As of December 2023, mobile money providers had a total active 30-day customer base of 31.4 million customers, a decline from 32.9 million in December 2022. About 809,000 new mobile money users registered in twelve months to December 2023, or 6.5 million more new customers registered for similar period in 2022 **(Figure 40)**.

Figure 40: Monthly New Mobile Money Active Customers (millions)



Source: CBK, NPS data

In recognition on the increased significance of the retail payment system in the economy, especially for MSMEs and the need to reduce use of cash, the CBK raised the limits for mobile money transactions and the size of the mobile money wallet. This was meant to support customers, businesses and institutions including Government agencies to make and receive digital payments in larger amounts, thereby increasing the convenience of mobile money services in Kenya. It was also meant to further deepen financial inclusion and facilitate businesses that have been constrained by the size of the mobile money wallet.

The limits increased from the initial mobile money transactions of KSh. 70,000 to KSh. 150,000, and later a daily limit for transactions and wallet size of KSh.300,000. As a result, PSPs that offer mobile money wallets increased the daily mobile money transaction limit from KSh 150,000 to a maximum of KSh 250,000 and the size of the mobile money wallet from KSh 300,000 to maximum of KSh 500,000, effective August 15, 2023.

This applied to all transactions that utilize mobile money rails and infrastructure, including transactions between PSPs, banks and other institutions that partner with mobile money providers. These changes however came with the requirements of PSPs to implement enhanced and appropriate risk mitigation measures to identify, mitigate and report risks, including money laundering, financing of terrorism and proliferation finance; fraud including the risk of digital or online scams; operational risks; cybersecurity; including speedy resolution of customer complaints.

Another significant reform was the issuance and implementation of the Kenya Quick Response Code Standard 2023 (KE-QR Code Standard 2023; or the Standard) on May 3, 2023. The Standard guides how PSPs and institutions regulated by the CBK were to issue Quick Response (QR) Codes to consumers and businesses that accept digital payments. The QR Codes are machine-readable code consisting of an array of black and white squares containing information that provide an alternative option for initiating and accepting digital payments made by customers at various points of sale, such as supermarkets, general stores, shops, among other outlets. The implementation of the Standard, and use of standardised QR Code-enabled payments, is expected to make it easier , faster, convenient, and secure to digital make payments compared to manually inputing different payment codes and numbers. Inputing different payment codes and numbers manually is cumbersome and prone to errors. In the long-term, use of standardised QR Codes will facilitate launch of innovative products and deepen the benefits already enjoyed by customers making payments across various institutions and mobile money networks (interoperability). The launch elevated Kenya to other leading markets that have implemented the standardized approach to issuing QR codes for facilitating payments. These include Philippines, Jordan, South Africa, Singapore, Bahrain, Saudi Arabia, India, and China.

While the mobile money dominates the retail payments system, there are other channels that continue to play a key role settling transactions. These are (credit and debt), Automated Teller Machines (ATMs), Point of Sale (POS) devices, and Automated Clearing House (ACH) that facilitates Electronic Funds Transfers (EFTs). The number of cards and Point of Sale (POS) terminals increased slightly in 2023. However, the number of Automated Teller Machines (ATMs) declined to 2,082 in December 2023 from 2,301 in December 2022, indicating a shift from TAM and fiscal branches to internet and mobile banking. The ACH, which facilitates the exchange of cheques and electronic funds transfers (EFTs) between banks and their customers was upgraded to International Organization for Standardization (ISO) 20022 to enhance efficiency through Straight-Through-Processing (STP) as well as inclusion of more information in payment transactions. The ACH migrated to the new flexible and data rich ISO 20022 Standards in March 2023 in line with the National Payment Strategy 2022-2025 and global standards. The upgrade, spearheaded by Kenya Bankers Association (KBA) in collaboration with CBK, has improved efficiency, flexibility scalability and availed rich remittances data, which provides insights in payments.

3.1.2 Central Bank Digital Currency (CBDC)

In the ensuing discussions and debates on the need for adoption of digital currencies and other virtual assets, global financial system community, in both advanced economies and emerging and developing countries, initiated measures that would place central banks at the centre of this financial technology. This would ensure that the public benefits from this technological innovation in terms of easy cross-border payments and broader financial inclusion, without being exposed to risks such as data protection concerns, cybersecurity, financial crimes such as infiltration of AML/CFT activities, and financial system stability concerns. The International Monetary Fund (IMF), Bank for International Settlements (BIS), and many central banks across the globe issued discussion papers, guidance notes and other research work to assess how this innovation can be mainstreamed into the formal financial system without compromising safety, integrity and stability of the system. The CBDC is generally defined as a digital liability of a central bank that is widely available to the public. Like existing forms of money, a CBDC would enable the public to make digital payments.

The Federal Reserves of the United States of America issued a discussion paper in January 2022 and published a report of its findings titled, *Money and Payments: The U.S. Dollar in the Age of Digital Transformation*, in April 2023. The report summarizes public comments on 22 questions circulated regarding issuance of Central Bank Digital Currency (CBDC). The paper sought to assess the pros and cons of a potential U.S. CBDC and therefore public feedback on a range of topics related to CBDC was crucial for this process. The Federal Reserve however notes that as a liability on its balance sheet, a CBDC would be the safest digital asset available to the general public, with no associated credit or liquidity risk. The paper noted the overwhelming and varying public comments and took it as a first step in fostering a broad and transparent public dialogue about CBDC. Continued engagement with the public is critical to informing and advancing the Federal Reserve's policy research and technical experimentation related to CBDC.

In Kenya, the Central Bank of Kenya issued a Discussion Paper on CBDC in February 2022 seeking views from the public on the potential applicability to Kenya. The objective was to inform policy decisions and public acceptance regarding the innovation. The CBK published the consolidated comments in a report titled, *Discussion Paper on Central Bank Digital Currency: Comments from the Public*. The report summarizes the public feedback and provides an update on key CBDC developments since February 2022 and contained additional information on the developments on crypto assets. The Discussion Paper received 100 submissions from individuals, public institutions, commercial banks, Payment Service Providers (PSPs), technology providers, academia, the legal fraternity, and international development partners. Respondents were drawn from Kenya, South Africa, United States of America, United Kingdom, the Netherlands, Germany, Switzerland, Sweden, and Japan. The main potential benefits cited by respondents was increased efficiency, transparency, and lower costs. On the flipside, respondents cited several risks, most notably, disintermediation of banks, high implementation costs, technology and cyber risks, and financial exclusion. It was also noted that Kenya has already highly developed digital payments ecosystem, and the high level of financial inclusion, hence CBDC would not yield more benefits. Further, while a CBDC may be useful for cross-border transactions, its risks should be carefully considered.

Globally, work on CBDC is ongoing for deeper understanding before any practical steps towards implementation. In fact, some of the central banks that had rolled out CBDCs, have faced challenges, thus pausing plans for full implementation while other major central banks have deferred decisions on the adoption of CBDCs. This has been complicated by excessive volatility in the global crypto assets market. Critical to Kenya is the value proposition of CBDC given the robust digital financial ecosystem and therefore the focus is on the risks rather than the benefits. This is consistent with CBK's vision for a payments system that is secure, fast, efficient, accessible to and works for Kenyans. CBK remains committed to promoting financial technology innovations that are aligned to its broader goals of fostering a stable market-based and inclusive financial system that is secure, serves all and meets the needs of the populace. It will continue collaborating with other central banks that have developed proof of concepts for CBDCs, to benefit from their experience.

3.3 Risks Assessment and Outlook

Over the last two (2) years, CBK has licensed twenty (20) Payment Service Providers (PSPs) to serve retail customers. The services offered include payment gateway services, money transfer services, wallet provision services and merchant payments, among others. This increase in licensed entities into the payment's ecosystem introduces several risks, including:

Cyber security risks Cyber risks have increased due to the digitisation of making payments and transfer of money from person to person. The cyber threats were high in 2022/23 and increased in between June 2023 and March 2024 than the threats reported in 2021/2022 **(Table 12)**. System misconfiguration had the highest increase in 202/23 and 2023/ 24 (March) while Botnet/DDOS threats were the lowest.

Table 12: Cyber threats

Cyber Attack Vector	20016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 Q1	2023/24 three quarters
Malware attacks	4,146,435	16,306,547	40,893,141	101,651,143	122,524,531	218,639,597	26,400,530	53,924,186
Web application attacks	2, 656,675	3,743,638	6,109,184	7,662,793	17,668,736	1,231,271	128,514	378,574
Botnet/DDOS	952327	3,756,334	4,852,022	1,475,537	16,236,587	120,064,763	7,613,124	38,726,688
System vulnerabilities/ misconfiguration	-	6,158	47,913	108,596	1,974,698	104,120,175	153,615,491	2,251,640,984
Total Cyber threats	7, 755, 498	23,815,972	51,903,286	110,898,069	158,404,552	444,055,806	187,757,659	2,344,670,432

Source:CBK and Communications Authority of Kenya

Anti-Money Laundering (AML)/Combating the Financing of Terrorism (CFT) risks arises from potential use of digital products and channels to perpetrate the crime. Some of the cyberattacks circumvent AML/CFT requirements in such a way that makes it difficult for some PSPs and customers to detect and deter. PSPs therefore need to conduct enhanced monitoring and reporting as guided by law to mitigate the risks. Additionally, the requisite customer due diligence (CDD) processes must be applied and reviewed periodically. PSPs must remain vigilant in monitoring activities of customers, both retail and merchants to avoid promoting unlicensed activities such as online forex trading and processing of transactions related to virtual assets.

Geo-political conflicts and geoeconomic fragmentations pose risks in terms of concerns for localization of processing of card transactions and payments. This is slowing down integration of the payments system and accelerating a switch to national system. Risks such as maintaining a robust business continuity framework, updating existing legal frameworks and guidelines to operationalize such initiatives may emerge. Enhanced oversight of the risks identified among other existing ones is paramount. Additionally, the implementation of a risk-based framework will assist in the supervision of the licensed entities, where the approach, mitigation and enforcement measures will reflect the level of risk brought by each entity.

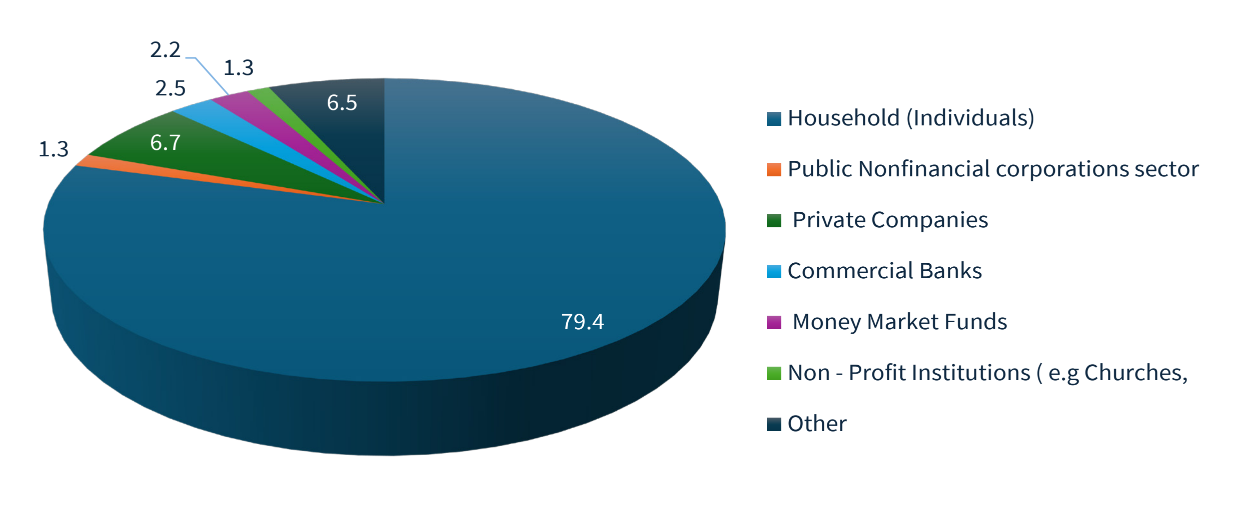
3.4. Transformation of Central Securities Depository, Dhow CSD

Modernization of financial markets infrastructure (FMI) in Kenya has gone beyond the payments and settlements system. The name '*Dhow*[8]' was deliberately adopted to signify the role that the *Dhow* CSD will play in financial and capital markets. The development and eventual rollout of *Dhow* Central Securities Depository (*Dhow*CSD) on July 31, 2023, marked significant transformation of FMI in Kenya. This versatile and systemically important FMI delivers world class levels of registry, custodial and settlement services for both primary and secondary market operations. It is simple, efficient, secure and convenient to use, thus contributing to market deepening as it enables access to the Kenyan government securities market by both local and investors abroad through a simple, secure, and efficient platform is transformative and is expected to contribute to financial stability.

This web-based and mobile-phone app platform allows self-service account opening and management; online bidding, auction process and results; and online viewing of upcoming corporate actions and access to updated portfolio statements. Investors are now buying government securities from both primary and secondary market anytime anywhere. This has transformed the market through operational efficiency and expansion of digital access; market deepening for broader financial inclusion; and contributed to improved monetary policy operations. These are key to supporting overall financial system stability.

At the launch on July 31, 2023, there were 41,125 CSD accounts for investors in total. This increased to 92,677 by September 6, 2024, thus accelerating investor base diversification, with retail investors accounting for 79 percent of all accounts held **(Figure 41)**. This has also contributed to savings mobilization, which is important for financial stability.

Figure 41: Improved Investor base Diversification



Source: CBK, Financial Markets

[8]Dhow' refers to the traditional wooden boat, which was used to facilitate the trading of merchandise along the coasts of East Africa, Eastern Arabia and South Asia. Additionally, '*Dau*' is Swahili word for *Dhow*. '*Mshika Dau*' means a stakeholder or participant, which resonates with investors who are the beneficiaries of the operations of the CSD. '*Mshika Dau*' also has an element of stewardship or being entrusted with something important, which also resonates well with the role of the CBK's wider mandate on Monetary Policy.

The *Dhow*CSD operational efficiency delivers fully automated auction module for government securities **(Table 13).** Its interfaces with other market infrastructure including KRA i-tax that allow easy tax remittances, the NSE trading platform for secondary market; and integration with CS-Meridian at the National Treasury for debt recording and management, and banking system for cash settlement.

Table 13: Dhow CSD Capabilities

Feature	Capability
Investor Onboarding	• Web-based self registration for CSD account opening an investor portal or mobile app. • CSD account is approved by your settlement bank after KYC.
Primary Market	• Online placement of bids. Bidding fully automated. • Cancellation of bids. • Online auction results access. • Online netting/roleover of investments.
Secondary Market	• Buy/ Sell T-bonds. • Pledge securities as collateral for credit. • Securities transfers.
Portfolio Holdings	• Online view of portfolio balance and statement. • Online view of upcoming corporate actions (coupons and redemptions). • Security valuation.

Source: CBK, Financial Markets

The ability to initiate secondary market and security pledges instructions in a convenient, simple, efficient, and secure manner enables investors to access liquidity easily. The smooth buy/sell matching and settlement of trades (DvP model) has contributed to improved trading of securities in the secondary market. The CSD serves to facilitate, not just the trading of Kenya Government securities locally and across the border, but also facilitates the integration of Kenya with international financial markets, thus contributing market deepening and stability.

4. FINANCIAL STABILITY ASSESSMENT AND OUTLOOK

Risks to the global financial stability followed stress that emerged in the U.S small-to mid-tier banks and takeover of the Switzerland's Credit Suisse by UBS in first quarter of 2023. This was attributed to the faster than anticipated and strong monetary policy tightening in advanced economies to stem elevated inflation risks. The emerging stress in the financial markets characterised by rapid increase in interest rates, and high funding costs amid liquidity stress led to closure of five regional banks in the US as well as Credit Suisse. This raised the question of financial dominance for central banks, who faced the challenge of taking strong position to deal with persistently high inflationary pressures without hurting the financial sector. Emerging Markets and Developing Economies (EMDEs) bore the heaviest cost of this risk in terms of worsening debt sustainability ratios mainly on account of national currencies depreciation, stock markets volatility following net capital outflows, high cost of living, and subdued growth.

The high funding costs due to high interest rates caused liquidity squeeze in some banks and introduced significant repricing risks for some interest rate-sensitive assets held by banks, mainly long term government bonds. The government securities held by banks and Non-Bank Financial Institutions for Sale (AFS) or Trading (HFT) recorded large unrealized paper losses in line with marked-to-market valuation requirements under the International Reporting Requirements. Where the holders faced liquidity stress culminating into securities selloffs, the losses were actualized and deducted from earnings with implications on overall capital. Thus, what began as liquidity stress due to constrained market funding eventually metamorphosised into solvency problem for some banks.

The financial sector is also facing emerging 'hybrid risks' – technology related risks including cybercrime (frauds and attacks) and climate change risks. Undoubtedly, adoption of technology and technological innovations in the delivery of financial services have come with significant efficiency gains. However, they have also come with losses arising from cyber-attacks and frauds as well as data breaches. The 2023Q1 stress in the U.S banking sector also introduced additional risk of technology adoption – role of social media. In the event of an institution coming under stress, technology has been used to quickly drawdown deposits and spread information on social media, thus driving the entity into closure. Adoption of digital currencies and crypto assets brings even more complication in the face of unregulated environment.

Climate change has also come with physical, transition and liability risks. There is increased frequency and intensity of episodes of floods, prolonged drought, and storms that cause significant physical damage on assets. Transition from carbon fuels to green energy is also exposing financial sector to sectoral risks. Banks and insurance companies incur losses and costs if these risks materialize. Kenya experienced heavy flooding in first half of 2024 and frequently experiences drought that spillover to the financial sector.

The continued geopolitical tensions including Russia-Ukraine War, Israel-Hamas-Hezbollah war, and U.S-China trade tensions, have raised concerns about global economic and financial fragmentation. This has implications on the cross-border capital flows, international payment systems, asset prices, exchange rate and global trade. The risks to macro-financial stability are likely to emerge in terms of debt sustainability concerns, increased funding costs, reduced earnings, constrained credit to the private sector and challenges in cross-border transactions in terms of settlement time and costs. Further monetary policy tightening or delayed monetary policy easing that keep interest rates higher for longer into first half of 2025 could impact negatively on global consumer demand. This could slow-down the pace of economic recovery in 2024 into 2025, thus heightening vulnerabilities of highly exposed countries in the EMDEs. The situation may be complicated by change of regimes in major countries that would make it difficult to reach consensus on the monetary and fiscal policy measures needed to put global economy to sustainable growth.

Easing of monetary policy in advanced economies is expected to stabilise the markets in 2024, thus reducing capital markets flight from EMDEs and even attracting new capital in search for yield. The twin risks of rising interest rates abroad and foreign exchange risks that affect foreign investors in EMDEs is expected to subside, thus renewing their interest in these markets.

The Sub-Saharan Africa region was resilient to the recent global banking sector turmoil, recording improved assets quality and stable capital base. It is however facing increased financial markets stress, national currency depreciations, further rise in inflation, accelerated capital outflows on flight to quality and safety strategies, elevated debt sustainability stress, and high cost of living. The region also faces high borrowing costs, worsening debt levels and challenges in accessing international capital markets as yields on Eurobonds rise even further. A careful policy balancing act between stemming inflation (by raising policy rates) and maintaining accommodative monetary policy conditions is needed to ensure the region remains on steady economic recovery path, with a financial stability. Policy makers in this region need to recognize all emerging risks and take appropriate intervention measures including the need to hold more capital and liquidity buffers against the risks.

In terms of hybrid risks, proactive policy actions to assess, quantify and institute measures to combat the potential risks of climate change must be accorded priority by SSA and EMDEs countries. This requires strong collaboration and effective coordination of both public and private sector players. Most vulnerable countries to climate change shock can consider mobilising resources for necessary funding for adaption and mitigation initiatives. Global cooperation and collaboration are also critical in dealing with climate change risks. Cybercrime and technology-related risks must be governed by commensurate regulation and supervision relative to the risk exposure to ensure quick remedial response and recovery to restore operations if an attack occurs. Information-sharing and incident reporting frameworks and helping emerging market economies build cybersecurity capacity are key to ensuring that all nodes of the network are resilient.

Countries faced with debt sustainability risks need to carefully implement fiscal consolidation measures without compromising provision of essential services to their citizens. Most of these countries already face high cost of living crisis, and therefore could seek concessional borrowing and support from international development partners to address the fiscal needs.

Domestically, Kenya's banking sector is expected to remain stable and resilient into first half of 2025, albeit elevated interest rates and credit risks as well as emerging operational risks. The sector has sufficient capital and liquidity buffers to withstand shocks. A few banks that are vulnerable to credit and interest rates may benefit from the expected easing of monetary policy tightening that would make market funding more accessible. The rising operational risks due to rising technological innovations and technology adoption can be mitigated by enhanced regulatory framework accompanied by a more robust supervisory and surveillance practices. In addition, institutions that are more vulnerable should have sufficient capital and liquidity buffers to absorb potential losses if these risks materialize. Investment in robust systems, enhanced internal control systems and well-capacitated teams would be critical in addressing the rising operational risks among institutions.

Insurance companies and pension funds are also expected to benefit from the recovery of markets, to register positive returns on their investments, growth in premiums and member contributions. Economic recovery and prudent management of Sacco societies are expected to contribute to further easing of credit risks and growth members deposits and numbers. Lastly, rollout of Dhow CSD to complement the ongoing modernization of Kenya's payments and settlements systems are expected to deepen the local financial sector, thus enhancing financial system stability.

Overall, the global macrofinancial conditions outlook remains positive albeit legacy risks. This is also reflected in the domestic macrofinancial conditions for Kenya. Policy makers, regulators, authorities, and other players should remain vigilant to take appropriate measures and mitigate the risks for macrofinancial stability in 2024 and beyond. Collaboration and effective coordination among all stakeholders is key to achieving this goal.

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